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MISSION 66 VISITOR CENTERS

THE HISTORY OF A BUILDING TYPE

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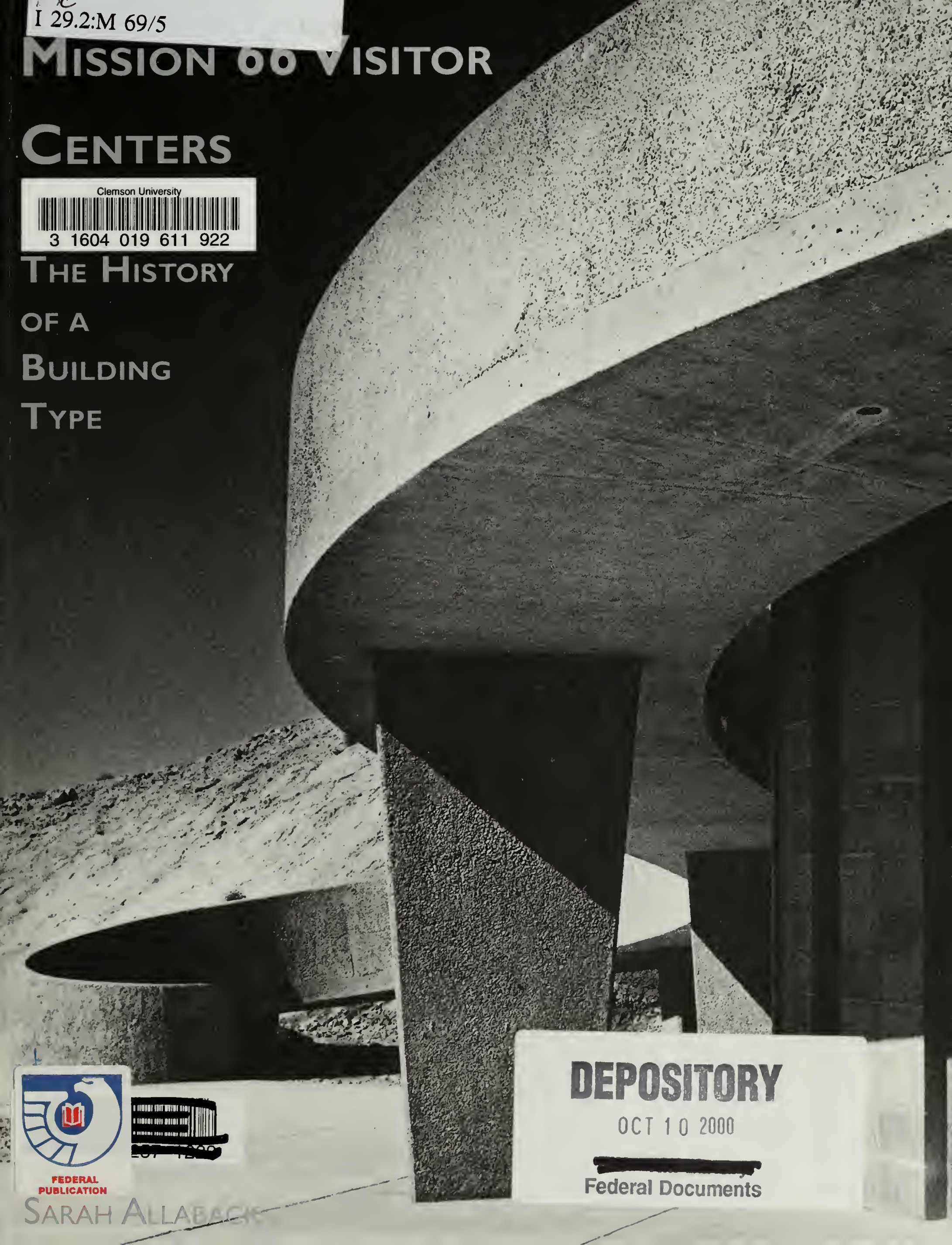

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Quarry Visitor Center, view from beneath ramp, ca. 1958. Photo by Art Hupy, courtesy of Richard Hein.

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MISSION 66 VISITOR CENTERS

THE HISTORY OF A BUILDING TYPE

SARAH ALLABACK, PH.D.

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National Park Service
Cultural Resource Stewardship and Partnerships
Park Historic Structures and Cultural Landscapes Program
Washington, D.C.
2000

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INTRODUCTION:

THE ORIGINS OF MISSION 66

In 1949, Newton Drury, director of the National Park Service, described the parks as "victims of the war."[1] Neglected since the New Deal era improvements of the 1930s, the national parks were in desperate need of funds for basic maintenance, not to mention protection from an increasing number of visitors. Between 1931 and 1948, total visits to the national park system jumped from about 3,500,000 to almost 30,000,000, but park facilities remained essentially as they were before the war. Without immediate improvements, the parks risked losing the "nature" that attracted people to them. Already, the floor of Yosemite Valley had become a parking lot littered with cars, tents, and refuse. Brilliant Pool, a popular thermal feature at Yellowstone, looked like a trash pit. Drury realized that new, modern facilities could help conserve park land by limiting public impact on fragile natural areas. But the necessary improvements required significantly larger appropriations from Congress. Throughout his tenure, Drury remained unable to obtain the necessary federal support for his program.[2]

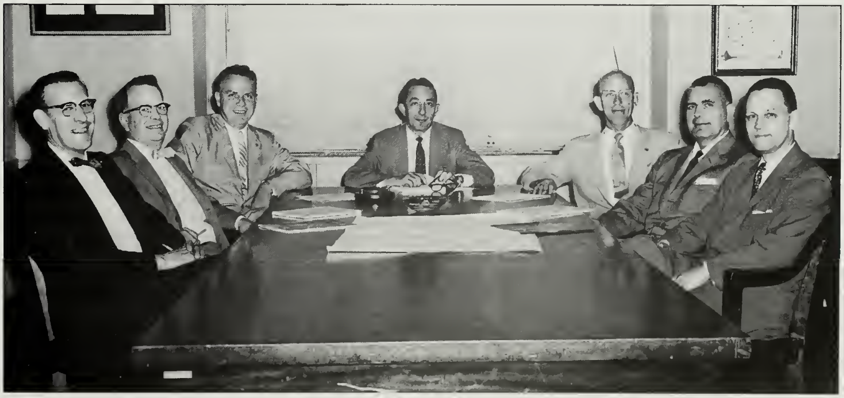
As Drury worried about "the dilemma of our parks," and basic methods of sustaining them, he also participated in planning a major architectural event: the competition for the design of the Jefferson National Expansion Memorial in St. Louis. Conceived during Franklin Delano Roosevelt's administration, the memorial project lagged during World War II, but in 1945 the idea was revived and with it the added incentive of providing a symbol of national recovery. The advisor for the design competition, George Howe, was known for his collaboration with William Lescaze on the Philadelphia Saving Fund Society (PSFS) building in Philadelphia, the skyscraper that brought the International Style to mainstream America in 1932. The competition attracted national media attention and submissions from one hundred and seventy-two architects, including Eliel Saarinen, The Architect's Collaborative (founded by Walter Gropius), and sculptor Isamu Noguchi.[3] Fiske Kimball, William Wurster, and Richard Neutra were among the judges who unanimously awarded first prize to the design of Eliel's son, Eero Saarinen. The 630-foot stainless steel arch was a monument to westward expansion, an engineering feat and an icon of modernist architecture. The conception, design, and construction of the gateway extended from the New Deal (the era of Park Service Rustic) to Mission 66, the ten-year park development program founded in 1956. Bolstered by a decade of congressional funding, the Mission 66 program would result in the construction of countless roads and trail systems and thousands of residential, maintenance, and administrative facilities, as well as the beginning of new methods for managing and conserving resources. When the arch was finally dedicated in 1968, Mission 66 had left a legacy of modern architecture in the national parks.[4]

Authorization for the Jefferson National Expansion Memorial was still pending in 1951, the year Conrad Wirth took over as director of the Park Service. Even more pressing problems of funding for new construction and facility maintenance remained unsolved. Over the next few years, the conditions Drury had described in 1949 would become a subject of public concern, not to mention ridicule. Social critic Bernard DeVoto led the crusade for park improvement with an article in his *Harper's* column, "The Easy Chair," entitled "Let's Close the National Parks," which suggested keeping the parks from the public until funds could be found to maintain them properly.[5] The story caught the attention of John D. Rockefeller, Jr., a longtime park patron, who wrote to President Eisenhower of his concern over this potential "national tragedy." Eisenhower's staff responded with a standard apology, but Rockefeller's letter did cause the President to request a briefing from Secretary of the Interior Douglas McKay on conditions in the parks.[6] As the need for massive "renovation" of the Park Service entered the public forum and reached the President's desk, the Park Service's pressing maintenance problems continued to mount.[7]

During the summer of 1954, Department of the Interior Undersecretary Ralph Tudor began a reorganization of his department that would indirectly result in the Mission 66 program. The leadership hierarchy of each bureau was "realigned" and a Technical Review Section established to coordinate the agencies. This procedure included a board of businessmen that examined Park Service policies in the hope of streamlining the bureaucracy. Issues of western mineral and water rights were of particular concern at the time because of the controversy surrounding the proposed construction of the Echo Park Dam at Dinosaur National Monument. Horace M. Albright, former director of the Park Service, served on an advisory committee for mineral resources. According to historian Elmo Richardson, the reorganization allowed Conrad Wirth to focus attention on the crisis in the Park Service, and its history of "subjective and procedural problems." Once the door was open, Wirth had a captive audience for his improvement program.[8]

Director Wirth's recollection of the birth of Mission 66 is fittingly more dramatic. In *Parks, Politics and the People*, Wirth remembers one "weekend in February, 1955," when he conceived of a comprehensive program to launch the Park Service into the modern age.[9] The brainstorm occurred once Wirth envisioned the Park Service's dilemma through the eyes of a congressman. Rather than submit a yearly budget, as in the past, he would ask for an entire decade of funding, thereby ensuring money for building projects that might last many years. Congressmen who wanted real improvements for the parks in their districts would support increased appropriations for the entire construction period. Armed with a secure budget, the program would generate public support through its missionary status and implied celebration of the Park Service's golden anniversary in 1966. Mission 66 would allow the Park Service to repair and build roads, bridges and trails, hire additional employees, construct new facilities ranging from campsites to administration buildings, improve employee housing, and obtain land for future parks. This effort would require more than 670 million dollars over the next decade. From its birth, Mission 66 was touted as a program to elevate the parks to modern standards of comfort and efficiency, as well as an attempt to conserve natural resources. Wirth immediately organized two committees to work on the Mission 66 program, a steering committee and a Mission 66 committee, with representatives from several branches of the Park Service, many of whom were to devote themselves full-time to the project. Lemuel Garrison put aside his new appointment as chief of conservation and protection to act as chairman of the steering committee. In his memoirs, Garrison captures the energy behind the mission and its fearless confrontation of park problems; each superintendent was asked to write a list of "everything needed to put 'his' park facilities into immediate condition for managing the current

Figure 1. Mission 66 Committee, 1956 (left to right: Howard Stagner, naturalist; Bob Coates, economist; Jack Dodd, forester; Bill Carnes, landscape architect; Harold Smith, fiscal; Roy Appleman, historian; Ray Freeman, landscape architect). Courtesy National Park Service Historic Photograph Collections, Harpers Ferry Center.



visitor load, while protecting the park itself."[10] They were also to estimate the number of visitors ten years in the future. During this early planning stage, the Mission 66 staff reviewed the history of Park Service development policy and began a pilot study of Mount Rainier National Park, Washington, chosen as typical of parks with a range of problems. From this study, the Mission 66 staff derived a list of priorities for determining park needs, which would also assist the superintendents in their assessments. One result of the project was the creation of park standards throughout the system. Each park was to have a uniform entrance marker listing park resources, a minimum number of employees, paved trails to popular points of interest, and other amenities; visitors could expect the same basic facilities in every park. The Mount Rainier study also led to seven additional pilot studies, a sampling of parks of various types throughout the country.[11]

During the course of its research, the planning staff benefited from public and personnel interviews and more general information from a national survey. In April 1955, private funding was obtained for "A Survey of the Public Concerning the National Parks." Audience Research, Inc., polled a national sample of 1,754 American adults to determine the level of knowledge about parks and park-related concerns. Although results indicate an appalling lack of education—twenty-two percent couldn't name a single park—they also confirmed the continued rapid increase in visitation and the general dissatisfaction of those who had made park visits. Over two-thirds of the visitors voiced complaints, the most common of which were overcrowding and the need for overnight accommodations. Of those visitors with suggestions for improvement, eighteen percent desired "more information about the sights to be seen, plaques, printed material, guide maps, lectures, etc." This response, second only to "more facilities for sleeping," demonstrated the public desire for the kinds of interpretive services gathered together in future visitor centers.[12]

By necessity, Wirth's preliminary planning of the Mission 66 program was geared towards promotion, and, in particular, selling his idea to Congress. Along with the pilot studies, the staff was to produce a basic outline of the program for the Public Service Conference at Great Smoky Mountains on September 18, 1955. Since a future meeting with the President had been confirmed in May, Wirth hoped to reserve "Mission 66" until then, but news of the program leaked out after the conference. In anticipation of the congressional meeting, the staff began work on a promotional booklet and final report.[13] After several dry runs and administrative delays, Wirth introduced Mission 66 to the President and his cabinet on January 27, 1956. The program received immediate approval from the President. The necessary documents for final authorization were signed in early February, and Mission 66 was officially

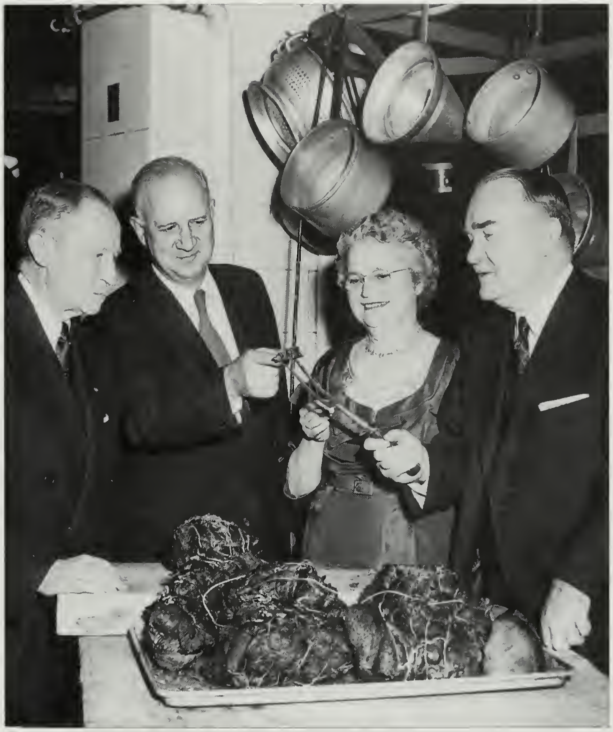


Figure 2. Conrad Wirth, second from left, sampling bison and elk meat at the American Pioneer Dinner, 1956. Undersecretary Clarence Davis is on the left and Mrs. Singer and Russell Singer, ex-vice president of the American Automobile Association, are on the right. Photograph by Abbie Rowe. Courtesy National Park Service Historic Photograph Collections, Harpers Ferry Center.

introduced to the public at an American Pioneer Dinner held at the Department of the Interior on February 8th. Highlights of this event included a presentation by Wirth, a Walt Disney movie entitled "Adventure in the National Parks," and the circulation of *Our Heritage*, a promotional booklet. Wirth himself was involved in the minute details of his carefully orchestrated marketing campaign. He personally chose the cover for *Our Heritage*—the Riley family of Williamsburg, Virginia, superimposed over a photograph of the liberty bell. The Rileys represented the ideal American family, the most desirable park visitors. Having achieved its immediate goals, the Mission 66 organizational staff was disbanded that month. A core group of the original members remained to help direct the ongoing program.[14]

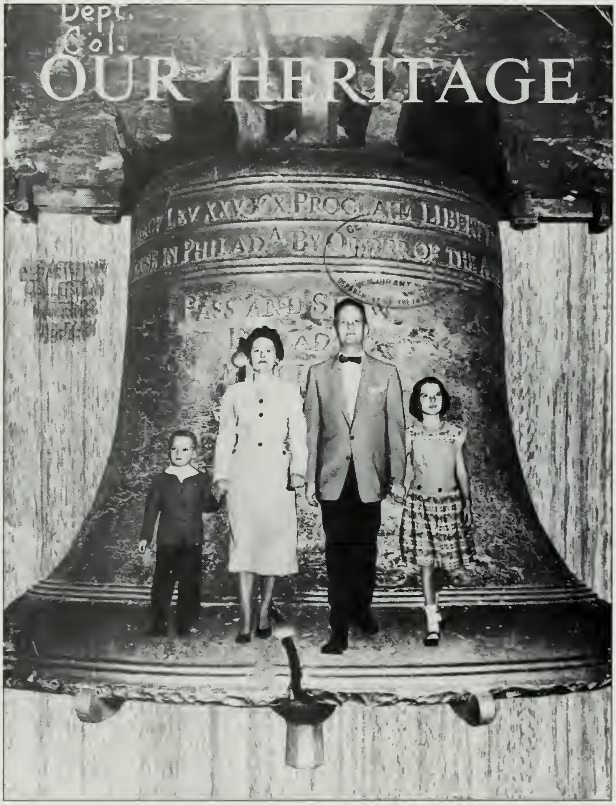


Figure 3. Our Heritage, *brochure cover, National Park Service, 1955.*

MODERN ARCHITECTURE IN AMERICA

Although the foundations of the modern movement in architecture were laid in the mid-nineteenth century, the "new tradition" did not reach mainstream America until the late 1920s. Henry-Russell Hitchcock wrote about this phenomena in *Modern Architecture* (1929), and in 1932 introduced the International Style to New York in an exhibition at the Museum of Modern Art. In their attempt to come to terms with recent innovations in architectural design, Hitchcock and his collaborator, Philip Johnson, described buildings like the PSFS skyscraper and Richard Neutra's Lovell House as examples of an "International Style." The primary characteristics of the style—emphasis on volume, regular organization of plan, and absence of applied ornament—represented a revolution in architectural design, according to the curators. Traditional methods of craftsmanship were replaced by more efficient methods of machine production. Over twenty years earlier, such founding fathers of the modern movement as Adolf Loos, Peter Behrens, and Frank Lloyd Wright preached that acceptance of this "machine aesthetic" freed architects from restraining conventions and would ultimately lead to a truly modern architecture.[15]

Hitchcock and Johnson traced the popularization of the International Style to the work of Swiss architect Charles-Edouard Jeanneret, better known as Le Corbusier (1887-1965). Le Corbusier began his career in the office of Auguste Perret, worked briefly for Berhens and Josef Hoffman, and founded the Purism branch of cubist painting with the French painter Amedee Ozenfant. By lifting residential spaces off the ground with thin columns, spiraling ramps, and terraces, Le Corbusier transformed the traditional parlor into an open space full of light and air. His houses not only accommodated automobiles and adopted the aesthetics of ocean liners, but were themselves "machines for living in." If Le Corbusier's villas of the 1920s exemplified the International Style, his writings on architecture brought the new movement into a public forum. Le Corbusier spread his architectural gospel in his own periodical, *L'Esprit Nouveau*, and through a few simple manifestos, beginning with *Vers une architecture* in 1923. Three years later, he described the "five points of architecture," a list of qualities essential to the new architecture. The basic elements—columns, roof terraces, free plans, strip windows, and free facades—would not have seemed so revolutionary were it not for Le Corbusier's passionate desire to cure social ills through design. Although his buildings never gained much popularity in the United States, Le Corbusier's philosophy exerted a profound influence over the development of American modernism. Even in the 1950s and 1960s, a watered-down form of the five points was visible in the design of modernist buildings.

The International Style exhibition also introduced Americans to the work of Walter Gropius, the German architect and founder of an innovative school of architecture and design. Established in Weimar in 1919, Gropius' Bauhaus taught a total approach to design that encouraged the collaboration of artists from different disciplines. Architects not only worked with furniture makers, sculptors, and painters in the design of buildings, but also mastered traditional crafts such as woodworking, weaving, and bookbinding. Practical training in workshops enabled students to apply the knowledge of generations to modern conditions. This experimental, team-oriented design philosophy created political divisions in the school, and in 1925 it moved to Dessau for a fresh start. Gropius' new glass and plaster Bauhaus building adapted characteristics of the modern factory, the imitation of which had come to suggest productivity and technological power. As a school, the Bauhaus generated publicity for the modern movement as well as for the collaborative method of architectural design. It also gave American architects a glimpse of "the new architecture" in an institutional building, as opposed to a private home.

Although not considered a proponent of the International Style, Frank Lloyd Wright was responsible for some of the most innovative housing of the century, beginning with his own Oak Park home and studio in 1889. The 1910-1911 publication of his work by the Berlin firm Wasmuth immediately attracted the attention of the elite European design world. Among Wright's admirers were two young Viennese architects—Rudolph Schindler and Richard J. Neutra—inspired by his drawings to seek modern architecture in America. Schindler set out for Chicago in 1914, and eventually Neutra followed him to Los Angeles, where they both hoped to find an audience for their work. They brought with them background in European modernism and experience in the offices of such pioneers as Adolf Loos and Erich Mendelsohn. Not only would they transform Southern California, but, with Wright, forever alter the future of American architecture.

Wright's Prairie Style houses hunkered down in the landscape and expressed a patriotic esteem for natural beauty, while Neutra's Lovell House (1927-1929) exposed a pristine white surface and flexed athletic cantilevers. Modernism in America would borrow from both. Wright attempted to create houses that blended with their environment through aesthetic means, but also recalled national values. The center of a Wright house was a hearth typically created of local stones and symbolic of domestic stability. In contrast, Neutra's residential architecture represented American individuality through aesthetic and technological freedom. The houses were free of restraining conventions; walls disappeared and windows opened up to the outdoors. The Neutra house symbolized American progress through efficiency, both of material and of plan. In his *Wie Baut Amerika?* (1927), Neutra used photographs of Chicago skyscraper construction to illustrate how innovation in engineering might influence architectural design. Whereas Wright searched for natural associations, Neutra buildings made "no naturalistic concessions to their surroundings."[16]

Despite all their differences, Wright and Neutra shared a design aesthetic perhaps best illustrated by their respective residential designs for Edgar J. Kaufmann. Wright's famous "Fallingwater" in Bear Run, Pennsylvania, was designed for Kaufmann in 1936; eleven years later, Neutra designed the Kaufmann residence in Palm Springs, California. Upon first examination the two houses, developed for two entirely different climates and locations, appear to have little in common. Fallingwater is a mass of solid masonry and concrete planes built up over a natural waterfall. The Kaufmann residence is practically translucent with glass window walls opening up the living quarters to the Southern California sun. Nevertheless, both houses use horizontal planes and stone masonry to create a connection with the landscape. Although Wright employs a series of terraces and Neutra focuses on a single plane, the buildings share a floating quality, a characteristic of modern architecture facilitated by structural innovation.

If Wright, Neutra, and the Europeans introduced in the Museum of Modern Art exhibit provided models for future buildings, the New Deal and the second world war acted as catalysts for a full-fledged modern movement in America. New Deal planning—the government's desperate effort to recover from depression—turned methods of federal administration upside down, creating an atmosphere more accepting of innovation. Although the war was detrimental to construction in America, it caused the immigration of many prominent European architects fluent in International Style theory and practice. Some of the most influential of these architects established themselves in American universities. Mies van der Rohe became the head of architecture at Armour Institute, the future Illinois Institute of Technology. Laszlo Moholy-Nagy founded the New Bauhaus in Chicago in 1937, the same year Gropius and Marcel Breuer brought Bauhaus philosophy to Harvard University. As chairman of the architecture department, Gropius taught the value of collaborating on design problems, a method he practiced through his firm, The Architects Collaborative.

During the Depression, the Public Works Administration hired modernist architects to design housing for industrial workers, setting a stylistic precedent for subsidized federal building programs. Among the first such examples of efficient, multi-unit housing was the Carl Mackley Homes in Philadelphia, an International Style complex designed by the German immigrant Oscar Stonorov. During World War II, the government once again turned to modernist architects to solve its housing problems. Stonorov was called on to design several projects in 1941-1942, including Audubon Village in Camden, New Jersey, and Pennypack Woods in Philadelphia. At the same time, Neutra was working with other prominent architects on the design for Avion Village in Grand Prairie, Texas. This project was followed by another government commission, a community development for shipyard workers in San Pedro, California, called Channel Heights. Gropius and Breuer's housing for ALCOA employees in New Kensington, Pennsylvania, initially mocked as "chicken coops," proved to be a remarkably efficient solution to the problem of inexpensive housing and limited space. These flat-roofed buildings were not considered aesthetically pleasing at the time, but their streamlined shape and strip windows would become ubiquitous during the 1950s and 1960s.[17]

The most obvious architectural indications of recovery from World War II were the skyscrapers that began to populate American cities in the early fifties. Lever House, designed by Skidmore, Owings and Merrill (SOM) in 1951, set the standard for the modern office building, complete with street-level plaza. In Manhattan, the Seagram Building by Mies, Johnson, Kahn and Jacobs presented a shimmering steel skeleton articulated by bronze projecting I-beams. The excess and innovation of the 1950s and 1960s resulted, in part, from aggressive methods of commercial development in the nation's largest cities. Under the auspices of urban renewal, countless downtowns were gutted by freeways. New government complexes replaced tenement housing. Highrise apartments were substituted for entire neighborhoods. Cities were re-zoned for commercial use and residential communities established on their outskirts. The emergence of such modern housing and zoning efforts is demonstrated by an urban renewal project on the edge of Los Angeles. Richard Neutra and Robert Alexander began their partnership with a design intended to transform the Mexican-American "slum" known as Chavez Ravine into high-density housing. The thriving state of the neighborhood was hardly noticed, especially since planners described the need for additional housing close to the spreading city. Only after Ravine residents were forced to clear out in preparation for development did local politicians put an end to the project. Their 1953 decision did not reflect an enlightened view of the area's value, but rather a growing fear of communism represented by government-sponsored public housing projects.[18]

The early fifties were a time of great change in American cities and in cultural attitudes toward the family, patriotism, and technology. As Mission 66 planners prepared for a decade of development in the parks, skyscrapers and high-density housing replaced historic buildings and familiar neighborhoods. For the majority of the population in positions of political power, downtown highrises and business centers anticipated a better, more efficient lifestyle for all Americans. The forces at work—capitalism and a society obsessed with progress—were prevalent throughout the country; it was only a matter of time before they would enter the national parks.[19]

MODERN ARCHITECTURE IN THE PARKS

Mission 66 reached the drawing boards in the mid-1950s, when park architecture included late Victorian lodges constructed by private concessioners, rustic architecture designed by the Park Service in the 1920s and 1930s, and temporary facilities erected to accommodate visitors during wartime, but often still in use. The Park Service Rustic style developed in the 1920s emphasized natural materials and associations with the surrounding landscape; eventually "rustic" became a label for any building erected by the Park Service that met this criteria, whether by imitating an adobe presidio or an alpine retreat. Such rustic construction demanded the labor of both skilled and unskilled craftsmen, and, during the 1930s, the Civilian Conservation Corps (CCC) provided the cheap manpower that allowed for such painstaking construction at low cost. Visitors and park personnel came to expect well-groomed trails, amenities like stone drinking fountains and steps, trailside museums, and other architectural features which appeared part of the natural landscape.

The prospect of modern architecture in the national parks shocked those not imbued with its progressive attitudes, inspired with its missionary zeal, or knowledgeable about its origins. News of modern architectural development immediately provoked an outcry from environmentalists and nostalgic visitors. One of the most outspoken critics of the new style was Devereux Butcher of the National Parks Association. As early as 1952, Butcher wrote of his horror at finding contemporary buildings in Great Smoky Mountains and Everglades and criticized the Park Service for abandoning its "long-established policy of designing buildings that harmonize with their environment and with existing styles." Among the eyesores he discovered were a curio store with "blazing red roof and hideous design," a residence "ugly beyond words to describe," and a utility building that might as well have been a factory. Later in the decade, David Brower and Ansel Adams joined Butcher in condemning such park development, although these critics focused more on issues of resource conservation than architectural style.[20]

Despite the criticism of Butcher and others, the Park Service felt it had remained consistent with its tradition of architectural design in harmony with the surrounding landscape. In fact, the design methodology behind the use of rustic architecture was adapted to explain contemporary design decisions. According to Director Wirth, Mission 66 buildings were intended to blend into the landscape, but through their plainness rather than by identification with natural features. Even the qualities that defined rustic architecture—local boulders, rough beams, etc.—might draw attention to a building created to serve a practical function.[21] As if to illustrate this fact, the Park Service refused to approve a restaurant designed by Frank Lloyd Wright for the concessioner at Yosemite Valley in 1954. Wirth called the building "... a mushroom-dome type of thing. A thing to see, instead of being for service."[22] The Park Service communicated this architectural philosophy in its early promotional literature, as well as in its relations with the national media. In August 1956, *Architectural Record* reported that Mission 66 would produce "simple contemporary buildings that perform their assigned function and respect their environment."[23] The magazine also emphasized that while this policy had traditionally led to the use of stone and redwood, "preliminary designs for the newer buildings show a trend toward more liberal use of steel and glass." One example of this trend was Dinosaur National Monument's Quarry Visitor Center, the much-acclaimed modernist facility designed by Anshen and Allen, Architects, of San Francisco. Two years after the rejection of Wright's "mushroom," the Park Service approved a modernist visitor center with a steel and glass exhibit area that made it "a thing to see." A decade later, at the conclusion of Mission 66, the Park Service would celebrate the dedication of the Headquarters at Rocky Mountain, designed by Taliesin Associated Architects, Ltd., the firm that evolved from the office Wright established in Scottsdale, Arizona, in 1938.

The contradiction between Park Service design philosophy and practice frustrated environmentalists, who were quick to point out the ironies unfolding before them and to criticize the Mission 66 program as heading toward excessive and unnecessary development. Within the Park Service, architects appear to have embraced the opportunity to modernize facilities and experiment with new design concepts. For example, Cecil Doty, a leading Park Service architect at the Western Office of Design and Construction (WODC) in San Francisco had designed the rustic Santa Fe Headquarters building in 1937. By the early 1950s, however, he recalled "a change in philosophy. . . . That's why you started seeing [concrete] block in a lot of things. We couldn't help but change. . . . I can't understand how anyone could think otherwise, how it could keep from changing."[24] Doty's statement provides a key to understanding the legacy of Mission 66 architecture, the purpose of which was not to design buildings for atmosphere, whimsy or aesthetic pleasure, but for change: to meet the demands of an estimated eighty million visitors by 1966, to anticipate the requirements of modern transportation, and to exercise the potential of new construction technology. As Director Wirth explained, the Park Service not only had to serve greater numbers of visitors, but to understand their increased need for appropriate facilities. The pressures of the modern condition—"the stress and restless activity of this machine age, when man is sending satellites spinning into orbit around the sun and our own earth"—required more frequent renewal in "the peace and solitude offered by nature."[25] Even critics agreed that some kind of action was necessary to bring the parks up to contemporary standards; for Park Service personnel, Mission 66 offered hope for the future of the system.

Mission 66 promoters and pioneers of the modern movement shared a belief in the power of architecture to change behavior; the language used to describe the program mirrored that of Le Corbusier and Mies van der Rohe. Wirth told his steering committee to be "as objective as possible. Each was to be free to question anything if he thought a better way could be found. Nothing was to be sacred except the ultimate purpose to be served. Man, methods, and time-honored practices were to be accorded no vested deference."[26] This need to abandon the past and rely on new approaches—the modernist philosophy in a nutshell—reflected the plight of a society recovering from depression and war. During the 1950s, America looked to the modern movement for answers to social and economic questions, and it seemed to offer answers: buildings could not only house the indigent, but help them to conform to middleclass ideals; ergonomic office towers would produce more efficient workers. The utopian idea that improvements in the built environment might transform society dated back to antiquity, but the technology available to seek that transformation was new, and it inspired a generation of modern architects. A writer for *Architectural Record* expressed this sense of limitless potential for park architecture in 1957:

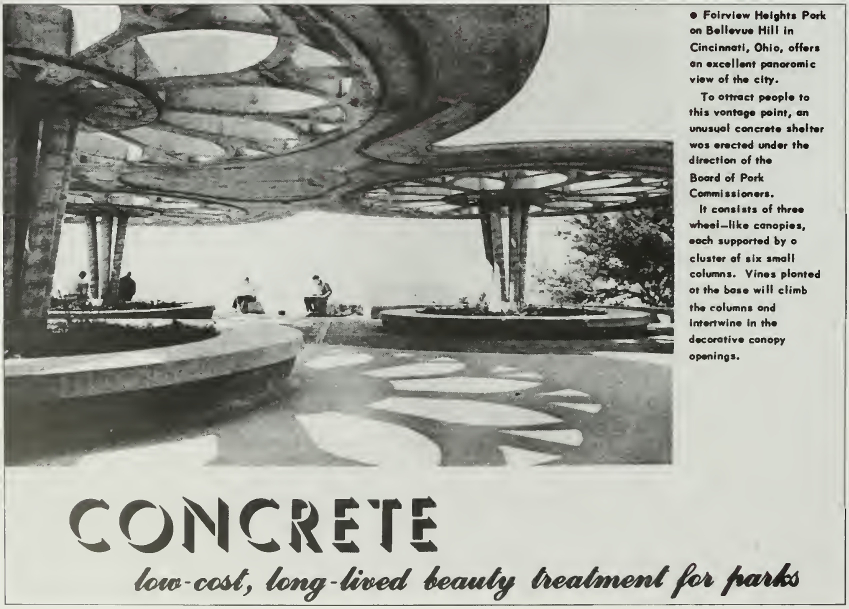
> Let us not decide, just because we cannot draw it on the back of an envelope, that the great and sympathetic architecture cannot exist. I shall have to insist that the effort to achieve or acquire great architecture has almost never been tried. The whole habit of thinking in the parks is the other way. We have not dared to let man design in the parks; we have not asked to see what he might do. We have slapped his hand and told him not to try anything.[27]

Modern architecture expressed progress, efficiency, health, and innovation—values the Park Service hoped to embody over the next decade.

The social acceptance of modernism and its use in the parks was also a matter of urgency and economics. The Park Service needed to serve huge numbers of people as quickly as possible, and, despite increased funding, it had to do so on a limited budget. The materials that modern buildings were composed of—inexpensive steel, concrete, and glass—allowed more facilities to be built for more parks. In its publication *Grist*, the Park Service praised concrete as "low-cost, long-lived beauty treatment for parks." Asphalt was "nature's own product for nature's preserves," and asbestos-cement products "building materials for beauty, economy, permanence."[28] The use of such materials was obviously loaded with cultural significance; concrete was certainly not new, and even the reinforced variety dated back to 1859. It was the appearance of mass production, a condition implying that a standard for human comfort had been attained, that appealed to followers of the modern movement. In the 1950s and 1960s, American society not only embraced modern materials and the ideals they represented, but became aware of the Park Service's interest in such advances. The Reynolds Metals Company invited Director Wirth to a meeting about progress in aluminum engineering. Wirth attended the event and acquired a copy of the book sponsored by the company, a survey of modernist architecture and interviews with important modern architects.[29]

Despite the general acceptance of modernism, Americans were still unfamiliar with modern architecture in national parks. The success of the Mission 66 program depended, in large part, on a tremendous public relations campaign. The program was promoted with press releases notifying newspapers of ground breakings, building dedications, and other indications of progress; signs identifying its projects; and various community events focusing on public education. Newspaper coverage of early Mission 66 projects describes the shock of the modern style in places the public expected "wilderness" and history. When *The New York Times* reported on the controversy surrounding Gilbert Stanley Underwood's Jackson Lake Lodge, the reporter emphasized the contrast between the new concrete building and the area's wild west tradition, noting that "sheepmen," "naturalists," and "gamblers" "now heatedly discuss the pros and cons of modern architecture." Nevertheless, the *Times* clearly admired "the artful blend of comfortable modern with western" even as critics called it "a slab sided concrete abomination." The *Virginian Pilot* was more conservative in its coverage of the "modern trend in architectural ideas" exhibited in the shade structures at Coquina Beach, Cape Hatteras National Seashore. Although Donald F.

Figure 4. Grist *cover, National Park Service, September-October, 1957.*



● Fairview Heights Park on Bellevue Hill in Cincinnati, Ohio, offers an excellent panoramic view of the city.

To attract people to this vantage point, an unusual concrete shelter was erected under the direction of the Board of Park Commissioners.

It consists of three wheel-like canopies, each supported by a cluster of six small columns. Vines planted at the base will climb the columns and intertwine in the decorative canopy openings.

CONCRETE

low-cost, long-lived beauty treatment for parks

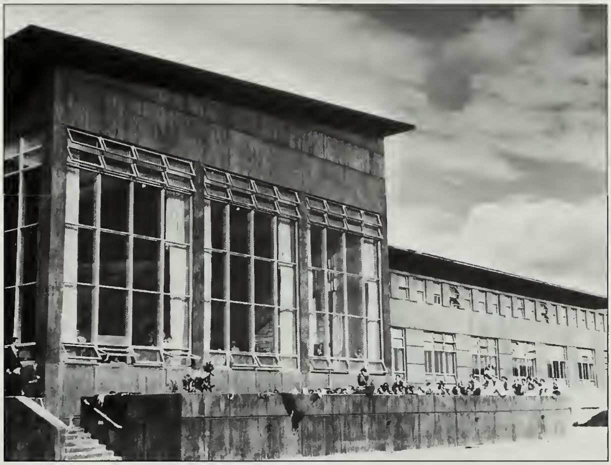
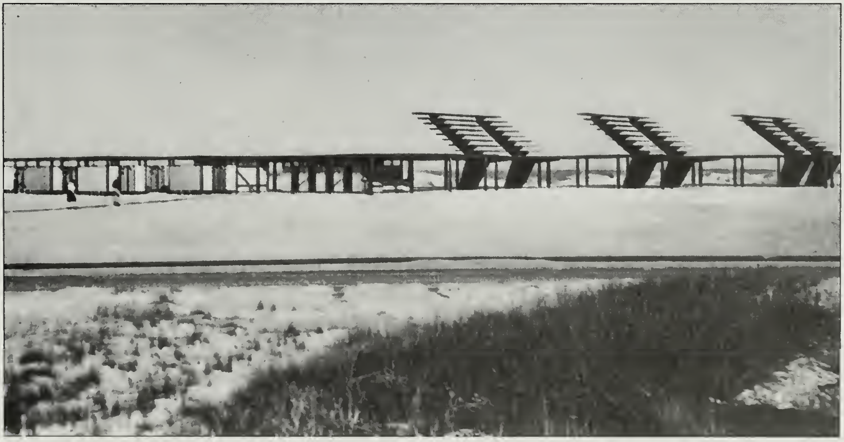


Figure 5. Jackson Lake Lodge, Grand Teton National Park, Moose, Wyoming. n.d. Photograph by Jackson Hole Preserve, New York. Courtesy National Park Service Historic Photograph Collections, Harpers Ferry Center.

Benson, a Park Service architect at the Eastern Office of Design and Construction (EODC) received a *Progressive Architecture* award citation for the design, the paper warned that, "until people get used to the modern trend," the new shelters would "cause as much comment as three nude men on a Republican Convention Program."[30] The Coquina facilities, destroyed by a storm in the early 1990s, soon became among the most widely praised designs of the Mission 66 era.[31]

If modern architecture seemed out of place in certain settings, it was rapidly becoming familiar in both suburbs and cities. By the 1950s, the

Figure 6. Coquina Beach shelter, Cape Hatteras, North Carolina, as pictured in an undated postcard from the collection of Donald Benson.



new tradition in architecture had stood the test of time, and the revolutionary designs of its founders were adapted and incorporated into mainstream American culture. For models of design, then, the youthful generation of Park Service architects and planners looked not to their old-fashioned predecessors in the parks, but to the work of such geniuses of modernism as Breuer, Neutra, and Eero Saarinen. But if Park Service designers could be conservative in their choice of modernism, they must also have been aware of dissension in the ranks of the architectural elite. A 1961 symposium on the state of national architecture brought a panel of influential practitioners together to discuss the current "period of chaoticism." All agreed that the promise of the new tradition had not been fulfilled; confusion and a depressing aimlessness prevailed. Amid this frustration, a glimmer of optimism called The Philadelphia School offered some direction. This group of young architects admired the buildings of Louis Kahn as well as the philosophy underlying his work. Kahn and his Philadelphia School rejected the traditional tenets of stripped-down modernism, seeking instead the spiritual side of design. Prominent members of this loosely associated group included Robert Venturi, Robert Geddes, and the firm of Mitchell, Cunningham, Giurgola, Associates (later known as Mitchell/Giurgola, Architects).[32]

The Park Service accepted modernism at a time when the new tradition had aged, and its post-modern backlash not yet emerged. The visitor center designed by Mitchell/Giurgola for the Wright Brothers Memorial was featured in a "news report" in *Progressive Architecture* suggesting that the Park Service had finally caught up with the standard required by the modern visitor. "The design of visitors' facilities provided for national tourist attractions seems to be decidedly on the upgrade, at least as far as the work for National Park Service is concerned. Disappearing one hopes, are the rustic-rock snuggery and giant-size "log cabin" previously favored."[33] That the progressive periodical chose two visitor centers to "exemplify new park architecture" was not surprising. The Park Service intended for the new visitor center buildings to represent the values and results of its system-wide development campaign. Whether or not the Park Service knew it was embracing a new strain of modernism is unclear.

Modernist architecture and planning approached the gates of the nation's capitol in 1965, when the Park Service collaborated on the Pennsylvania Avenue Historic District inspired by President Kennedy. During his inaugural parade, the President commented on the unsightly appearance of Pennsylvania Avenue, and it fell to Secretary of the Interior Stewart L. Udall to instigate improvements. Udall consulted with Nat Owings, principal of SOM, the nationally famous architectural firm known for its major planning projects and modern office buildings.[34] For the area bounded by the Capitol and the White House, Owings "contemplated a totally new creation along Pennsylvania Avenue . . . we'd tear down everything there and build a monumental national avenue framed with totally new monumental structures."[35] In an effort to generate funds for the scheme, the Park Service conducted an historical study of the area and ultimately declared it an historic site in 1965. The growing consciousness of the importance of historic preservation, which culminated in the National Historic Preservation Act of 1966, helped to save potentially endangered historic buildings within the district, such as the Willard Hotel. Ironically, the Park Service's own policy towards historic areas compromised the modernist redevelopment plan. One result of the Mission 66 program was the realization that historic buildings and districts required federal protection.[36]

A NEW BUILDING TYPE

Even before the commencement of the Mission 66 building program, its public relations campaign addressed important issues in the design of a new type of visitor facility—the visitor center. The cover of the September "Mission 66 Report" depicts the national park system as a scale balancing protection and use, a balance the centralized visitor center was intended to achieve, at least in principle, through the management of visitor circulation. *Our Heritage* described the visitor center as "one of the most pressing needs, and one of the most useful facilities for helping the visitor to see the park and enjoy his visit." Visitor centers were lauded as "the center of the entire information and public service program for a park."[37] One hundred and nine visitor centers were slated for construction over the ten-year period. This new type of park facility would not only embody new park visitor management policies, but also the spirit of Mission 66, which looked forward to an efficient Park Service for the modern age.

During the early 1950s, Park Service architects and planners began developing a centralized service facility to manage increased visitation. Small rustic museums, such as those designed by Herbert Maier in the 1920s and 1930s, could no longer meet the needs of tourists expecting trailer lots and modern campgrounds. The updated facility, equipped with basic services and educational exhibits, was known in its early stages as an "administrative-museum building," "public service building," or "public use building." As this range of labels suggests, the Park Service was struggling not only to combine museum services and administrative facilities but to develop a new building type that would supplement old-fashioned museum exhibits with modern methods of interpretation. In February 1956, Director Wirth issued a memorandum to help clarify the use of terminology applied to the new buildings, explaining that "there are differences in the descriptive title, although most of the buildings are similar in purpose, character and use."[38] From then on, Wirth expected park staff to use "visitor center" for every such facility, even "in place of Park Headquarters when it is a major point of visitor concentration." As late as 1958, however, the matter remained unclear to many park visitors. When the topic was raised at a design conference, it was noted that "the term 'Visitor Center' is sometimes confusing to the public as it is an unusual and specialized facility which may be associated with shopping centers with which the general public is familiar."[39] If still puzzling to some, the building's label emphasized the novelty of the visitor center and bolstered the Park Service's image with high-profile examples of Mission 66 progress.

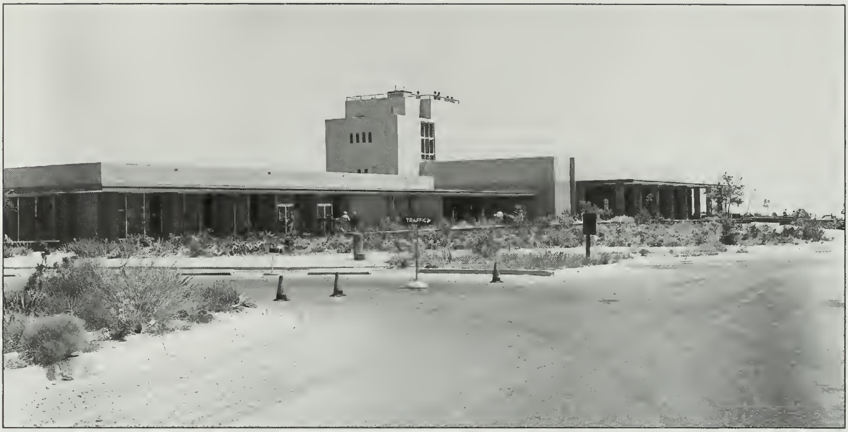
The Custer Battlefield museum and administration building, designed by Daniel M. Robbins & Associates of Omaha, demonstrates the transition from early Park Service museum buildings to standard Mission 66 visitor centers. The building was constructed in 1950, the first year since World War II that congressional appropriations for the parks included museum funding.[40] A lobby space and offices were incorporated into the new museum, but orientation areas remained small; no audio-visual or auditorium space was included, and restrooms were relegated to the basement. Visitor circulation between the various areas does not appear to have been a major consideration. In 1964, the WODC made preliminary designs for an addition to the "visitor center," and construction drawings were drafted by Max R. Garcia, a contract architect based in San Francisco. The new wing added restrooms and offices to one end of the building.[41]

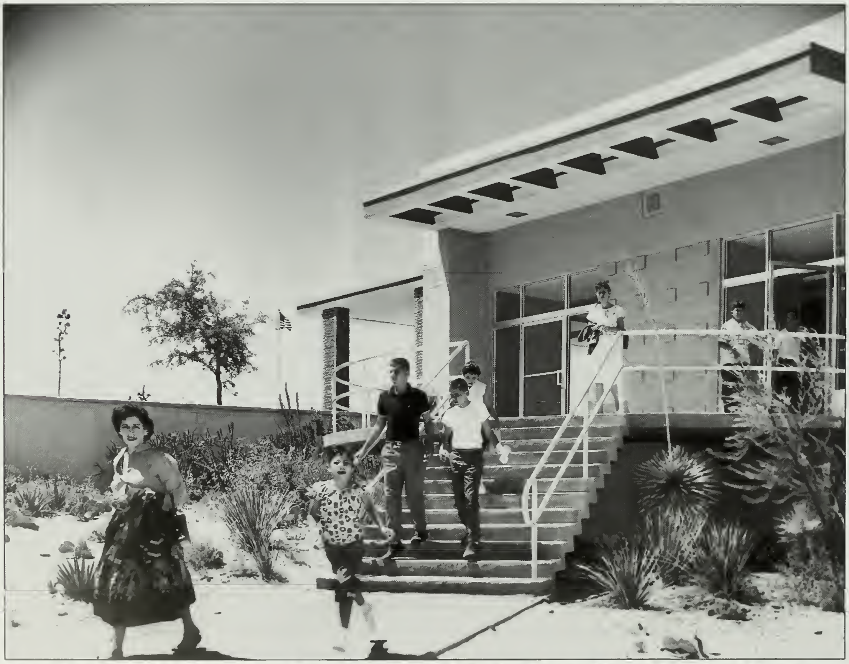
The Department of the Interior *Annual Report* for 1953 announced the commencement of "the first major public use development at Flamingo, on Florida Bay," which would consist of "a boat basin and other developments . . . camping and picnic facilities, dock and shelter building, roads, and water and sewer systems." At this time, "public use" was still a general term, applicable to a marina or an interpretive facility. The report also noted "administration and public-use buildings at Joshua Tree and Saguaro National Monuments, and utility buildings in Potomac Park, Washington, D.C., and at Death Valley National Monument."[42] Other early precedents for visitor centers included the public information centers at Yorktown and Jamestown.

The public use building planned for Carlsbad Caverns in July 1953 underwent the transition to visitor center during its design and construction. Preliminary drawings for the building were produced by the Office of Design and Construction in Washington, D.C., before the creation of the eastern and western design offices. Thomas C. Vint, chief of the Washington office, signed off on the proposal for a streamlined, two-story public use building with steel and glass facade. It featured a central lobby area and, on the left side, a coffee shop/fountain/dining room, curio store, and kitchen. The museum and auditorium were entered from the right side of the lobby, which included the women's restroom. Park Service offices were in the basement, along with the men's restroom, and on the second floor, where they overlooked the double-height lobby.[43] By December 1954, a more detailed preliminary design for the Carlsbad Caverns facility had been drafted in which the entrance lobby was attached to a lounge area on the right side surrounded by restrooms, an exhibit space, and a ticket booth. The concession area was further defined as a curio shop, coffee shop, nursery, playroom, kitchen, and offices. This design incorporated an existing elevator building constructed in 1932, and one wing of the new facility was built by the concessioner, the Cavern Supply Company, with guidance from the Mission 66 staff.[44] The 1955 *Annual Report* called it "a public use building and elevator lobby, museum and naturalists' offices."[45] By January 1956, "the Public Use Building was in the final stage of preparation," but when bids for construction were opened in March, the building was referred to as a visitor center.[46] In his dedication speech nearly three years later, Conrad Wirth praised the Carlsbad Caverns Visitor Center for its use of "modern design" and "modern high-speed passenger elevators."[47]

Early proposals for the public use building at Grand Canyon suggest a similar struggle with programmatic aspects of the new facility. Preliminary drawings of the building were produced in 1954, with several proposals designed by Cecil Doty. One early scheme featured rooms organized around an open courtyard, a floor plan reminiscent of Doty's design for the Santa Fe Headquarters almost twenty years earlier. The visitor entered the lobby and faced an information desk. Restrooms were on the right, and a hall led to a wing of offices. Exhibit spaces began on the left side and wrapped around the interior courtyard. An auditorium was located behind the exhibit space. The expanded role research would play in the Mission 66 program was suggested by a series of three "study collection" rooms, an associated workshop, library, and storage for the reference print and slide files. Administrative offices were located in this area. The courtyard scheme allowed visitors to enter and exit rooms across the patio as they pleased.

Other designs for Grand Canyon's public use building centered around the lobby space and information counter. In one scheme, the museum wing was located on the left, with three square rooms en suite—exhibit room, study collection, and workshop. The restrooms were located immediately to the right of the entrance, and the library and offices behind the information counter. An alternative known as "Plan B" consisted of a similar arrangement of spaces, but omitted many of the interior partitions, foreseeing the "open plan" of the future. Despite



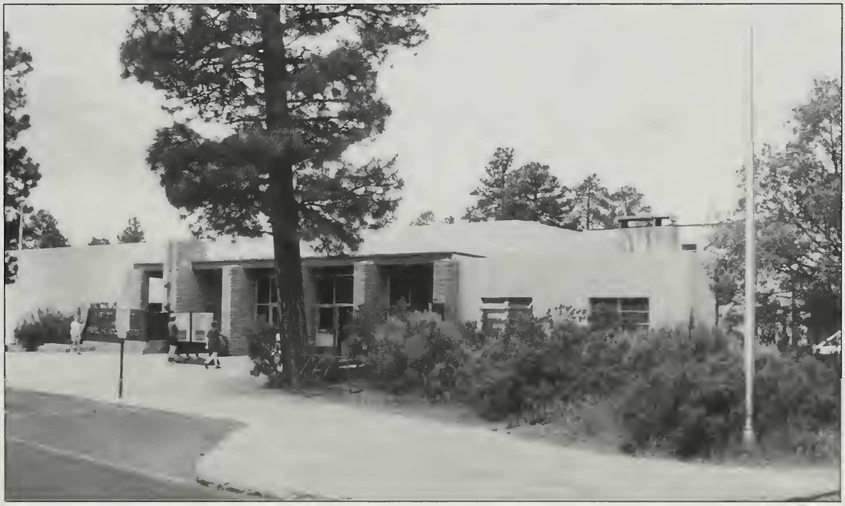


Figures 7 and 8. Carlsbad Caverns Visitor Center. Photos by Jack E. Boucher. Courtesy National Park Service Historic Photograph Collections, Harpers Ferry Center.

variations in plan, the front facade of the various proposals remained remarkably similar. The entrance area was mostly glass framed in decorative brick. The exhibit wing to the left was cement stucco and the wing to the right either additional brick or stucco. The building was long and low, with little to attract attention except the flagpole and sign.

By 1955, the courtyard scheme had been chosen, perhaps because its plan allowed for more flexible circulation. Visitors entered a lobby and were confronted with an information desk on their right, directly in front of the rangers and superintendents' offices. The library and restrooms were straight ahead, and the exhibit space, lecture room, study collection/workshop, and offices arranged in clockwise procession around the courtyard. Other versions of this plan included an auditorium behind the exhibit room, but this facility was never built. The public use building was an immediate source of pride for the Park Service, which praised this "visitor center" as "a one-stop service unit" in 1956. An information desk complete with uniformed ranger, lobby exhibits, an illustrated talk, and a park museum "where a great variety of exhibits, arranged in orderly and effective fashion" were among the many conveniences for the visitor. The presence of the park superintendent and naturalist was also considered remarkable, as were the study collection, workshop, and library. According to the Park Service, the new building provided much-needed efficiency and economy.[48]

Figure 9. Grand Canyon Visitor Center, originally known as a public use building, in 1998. Courtesy National Park Service.



A New Style

The Mission 66 era visitor center also embodied a distinctive new architectural style that can be described as "Park Service Modern." By the late 1930s, Park Service architects had become aware of the influence of European modernism on many of their contemporary professionals, but the strong institutional tradition of rustic architectural design prevented modern architecture from having a significant influence. Park Service designers knew that American architecture was changing fundamentally, and the situation had also changed in the national parks. Years of deferred maintenance followed by unprecedented levels of park use put tremendous pressure on New Deal era facilities. "Rustic" began to take on negative connotations of dated, inadequate, and even unsanitary. At the same time the profession of architecture in the United States embraced modern architecture with unqualified enthusiasm, and the American construction industry was being transformed by new inexpensive materials and labor saving techniques.

Park Service Modern architecture responded to the new context of postwar social, demographic, and economic conditions. The new style was an integral part of a broader effort at the Park Service to reinvent the agency, and the national park system, for the postwar world. The creators of Park Service Modern were certainly not new to the Park Service or to national park design. Director Wirth, for example, had been responsible for the Park Service's state park development program in the 1930s. His chief of the Washington planning and design office, Tom Vint, had been chief landscape architect since 1927, and was one of the principal creators of the Park Service Rustic style. Other Park Service planners and designers who remained active in the 1950s, such as Cecil Doty, had been principal figures during the prewar, Park Service Rustic era. But if in many ways this group continued the tradition of park planning that they had created over the previous decades, in other ways, postwar conditions, new practices in the construction industry, and federal budget policies of the era necessitated new approaches to national park management.

These new approaches were especially evident in the design of the new visitor centers. The showcase facilities were clearly intended to exploit the functional advantages offered by postwar architectural theory and construction techniques. The larger, more complex programming of the visitor center encouraged Park Service architects, especially Cecil Doty, to take advantage of free plans, flat roofs, and other established elements of modern design in order to create spaces in which larger numbers of visitors could circulate easily and locate essential services efficiently. Such planning implied the use of concrete construction and prefabricated components and was further complemented by unorthodox fenestration and other aspects of contemporary modern design. At the same time, Park Service Modern also built on some precedents of earlier rustic design, especially in the use of interior courtyards and plain facades, which Cecil Doty had used, for example, in Pueblo revival structures of the 1930s.

The architectural elevations of Park Service Modern visitor centers—apparently so different from the applied ornament and historical associations of Park Service Rustic—also reflected the new approach to designing what was, after all, a new building type. Stripped of most overtly decorative or associative elements, the architects typically employed textured concrete with panels of stone veneer, painted steel columns, and flat roofs with projecting flat terraces. These were established formal elements of the modern idiom, but they also often allowed the sometimes large and complex buildings to maintain a low, horizontal profile that remained as unobtrusive as possible. Many visitor centers were sited on slopes, so that the public was presented with a single-story elevation, while the rear (service/administrative façade) dropped down to house two levels of offices. Stone and textured concrete could also take on earth tones that reduced visual contrast with landscape settings. The Park Service Modern style developed by the Park Service during the Mission 66 era was a distinctive new approach to park architecture. The style was quickly adopted and expanded upon by Park Service consultants, notably Mitchell/Giurgola and Neutra. The Park Service Modern style soon had a widespread influence on park architecture not only in the United States, but internationally as well.

Park Service Modern architecture also reinterpreted the long-standing commitment to "harmonize" architecture with park landscapes. The Park Service Rustic style had been essentially picturesque architecture that allowed buildings and other structures to be perceived as aesthetically harmonious elements of larger landscape compositions. The pseudo-vernacular imagery and rough-hewn materials of this style conformed with the artistic conventions of landscape genres, and therefore constituted "appropriate" architectural elements in the perceived scene. Rustic buildings harmonized with the site not just by being unobtrusive, but by being consistent with an aesthetic appreciation of the place. Park Service Modern buildings were no longer truly part of the park landscape, in this sense, since they were not sited or designed to be part of picturesque landscape compositions. But in many cases this meant that buildings could be sited in less sensitive areas, near park entrances or along main roads within the park. At times, the new, larger visitor centers could be even less obtrusive than rustic buildings often had been. Park Service Modern architecture, at its best, did "harmonize" with its setting, but in a new way. Stripped of the ornamentation and associations of rustic design, Mission 66 development could be both more understated and more efficient. If the complex programs and extensive floor areas of the new visitor centers had been designed in a rustic idiom, the buildings probably would have taken on the dimensions and appearance of major resort hotels. Park Service Modern offered a new approach that, when successful, provided more programmatic and functional space for less architectural presence.

The new style had its critics from the very beginning, but Park Service Modern, as developed by Park Service designers during the Mission 66 era, became as influential in the history of American national and state park management as the Park Service Rustic style had been. During the postwar era, the Park Service succeeded once again in establishing the stylistic and typological prototypes for new state and national park development all over the country.

The Visitor Center

The Mission 66 visitor center remains today as the most complete and significant expression of the Park Service Modern style. Mission 66 planners coined the term "visitor center" to describe a building that combined old and new building programs and that served as the centerpiece of a new era of planning for American national parks. The influence of the Mission 66 visitor center was profound. New visitor centers (and the planning ideas and architectural style they implied) were used in the development or redevelopment of scores of state parks in the United States, as well as nascent national park systems in Europe, Africa, and elsewhere. In 2000, the visitor center is still the core facility of park development programs for parks of various sizes and in various contexts all over the world.

The use of the word "center" indicated the planners desire to centralize park interpretive and museum displays, new types of interpretive presentations, park administrative offices, restrooms, and various other facilities. The underlying theory relates to contemporary planning ideas such as shopping centers, corporate campuses, and industrial parks, all of which sought to give new civic form to emerging patterns of daily life and urban expansion in the late 1940s and 1950s. Like the shopping center, the visitor center made it possible for people to park their cars at a central point, and from there have access to a range of services or attractions. Earlier "park village" planning had typically been more decentralized, with different functions (museum, administration building, comfort station) spread out in an arrangement of individual, rustic buildings. The Mission 66 visitor center brought these activities together in a single, larger building intended to serve as a control point for what planners called "visitor flow," as well as a more efficient means of serving far larger numbers of visitors and cars in a more concentrated area. Centralized activities created a more efficient pattern of public use, and assured that even as their number grew to unprecedented levels, all visitors would receive basic orientation and services in the most efficient way possible.

Considering the commitment of Mission 66 era planners to accommodating the growing numbers of people who wanted to visit the parks, the centralized visitor center was an essential approach to park preservation. The visitor center facilitated, yet concentrated, public activities and so helped prevent more random, destructive patterns of use. The siting of visitor centers was determined by new considerations in park master planning that involved the circulation of unprecedented numbers of people and cars. While on the one hand the Park Service remained committed to making the parks accessible to all who wanted to use them, on the other agency planners also felt it was desirable to continue to concentrate automotive access in relatively narrow areas and road corridors, most of which were already developed for the purpose. As a result, Mission 66 development plans (at least in larger parks) usually called for the intensification of development in existing front country areas, rather than opening back country areas to new uses. This implied road widenings, the expansion of campgrounds and parking lots, and often, the construction of a new visitor center. The visitor center was therefore sited in relation to the overall park circulation plan, in order to efficiently intercept visitor traffic. The criteria for siting Mission 66 visitor centers therefore differed significantly from the criteria for siting and designing the rustic park villages and museums of the prewar era.

The planning and design of visitor centers began in the Park Service offices of design and construction in San Francisco (WODC) and Philadelphia (EODC). Both offices had been established as part of the Park Service's reorganization in 1953, and both were overseen by the central planning and design office in Washington, D.C. Neither the WODC nor the EODC was prepared for the quantity of work Mission 66 would bring to the drawing boards. Rather than hire additional architects and landscape architects who would have to be laid off at the conclusion of Mission 66, the Park Service planned to contract out work to private firms on a project by project basis. In most cases, the Park Service furnished contract architects with preliminary drawings, which the consultants would then use as the basis for the developed design. In some cases, consultants simply provided the contract drawings for designs that had been fully developed in-house. Visitor centers were typically the most expensive new buildings in the parks, as well as high-profile commissions and, therefore, attractive to private consulting firms.[49]

Although the need to hire additional employees for architectural work was commonly explained as a matter of practical necessity, A. Clark Stratton, who replaced Tom Vint as the director of the Washington planning and design office in 1961, offered a different explanation for the influx of contract architects. In an interview, Stratton described how the Park Service was required by the General Services Administration (GSA) to hire professional design consultants for all buildings exceeding $200,000 in cost. Stratton's office could request authority from the GSA to hire their own consultants, or they could allow the GSA to manage their larger projects. Once the specifications and working drawings had been completed, the Park Service took over construction supervision. During the early years of the Mission 66 program, the GSA had handled the Yorktown and Jamestown contracts, yielding "not too satisfactory" results, according to Stratton. The Park Service clearly preferred managing its own projects. Stratton's comments help to explain why most of the Park Service's contracts with private architects involved larger visitor center commissions, while lower budget projects were left to in-house designers. Smaller park buildings, such as comfort stations and employee housing, were standardized and controlled under strict budgetary limitations.[50]

But whether or not consulting architects were employed, in all projects the Park Service retained control over the location of buildings and, in many cases, significant aspects of the consulting firm's design. The planning of early visitor centers reflected the Mission 66 concern with protection and use, the idea that park development provided the key to preservation. According to the 1955 *Annual Report*, the Park Service decided to locate administration offices, warehouses, shops, and residences away from areas devoted to visitors, creating separate "zones" for maintenance, employee housing, administration, and visitor services. Location within the park was also an important interpretive issue. Planners debated whether visitor centers provided better visitor orientation from a location near the entrance to the park, or were more effective near a significant feature that visitors would want to see and know more about. In some cases, this issue was resolved by creating secondary visitor centers, which were usually little more than a single exhibit space equipped with restrooms.

Throughout the Mission 66 period, the Park Service's overriding goal for its visitor centers was to improve interpretation and stimulate public interest in the park. To do this, the park's "story" was to be told as clearly and effectively as possible. Historians and interpreters played crucial roles in the Mission 66 planning process. According to Robert

Utley, chief historian for the Park Service beginning in 1964, historians such as Roy Appleman and Ronald Lee favored siting visitor centers "right on top of the resource" so that visitors could "see virtually everything from the visitor center."[51] The location of visitor centers in sensitive areas often occurred at cultural sites and battlefields, where the purpose of the visitor's trip to the site was to gain a fairly comprehensive understanding of an important historic event. The preservation of cultural and natural resources sometimes became a concern, but was rarely articulated, according to Utley. The siting of a visitor center among the ruined structures at Fort Union, for example, was deemed advantageous for interpretation. During the Mission 66 period, the Park Service strove to educate the public, sometimes even at the expense of encroaching on the historical or natural environment. Mission 66 historians and planners believed that more effective public education justified such encroachments, and that the resulting understanding of sites would lead to greater support for preservation. But if this priority meant sometimes siting visitor centers in sensitive areas, it did not extend to other types of development. Director Wirth emphasized that "definite steps were taken to move as many of the administrative, government housing, and utility buildings and shops as possible out of the national parks to reduce their interference with the enjoyment of park visitors."[52]

Within the visitor center building, Park Service designers faced the challenge of orienting visitors and directing them to desired services. These design decisions also affected visitor impact on park resources. The visitor center was considered "the hub of the park interpretive program," and a method of orienting park visitors who "lacking these services, drive almost aimlessly about the parks without adequate benefit and enjoyment from their trips."[53] Not only was the visitor center a signpost intended to attract the aimless visitor within, but also a method of distributing information and other services in the most efficient and significant manner. Park Service architects confronted such issues in the development of building "circulation" or "flow" diagrams. Visitor circulation patterns were particularly important in this type of building, because people were expected to use the building in different ways; while some would study the exhibits and watch the films, others were only interested in visiting the restrooms or purchasing a park map. At this early date, Park Service architects had no precedents for use patterns, and, therefore, only a vague idea of how the new buildings would function.

The Park Service design and construction staff and interpretation staffs held joint meetings on visitor center planning in November 1957 (EODC) and February 1958 (WODC) and distributed their general findings in a summary. The discussions focused on participants' experience at early visitor centers, particularly those at Colonial National Historical Park and Grand Canyon. Conference participants discussed the desirability of open design, the need for outdoor restrooms, the importance of determining anticipated numbers of visitors, and the consideration of administrative requirements. Planning visitor center interpretation in conjunction with roadside and trailside interpretation was also encouraged. Individual spaces were to be designed with environmental factors in mind. If the lobby served as "a transition area for the harassed visitor between the crowded highway and the park atmosphere," it should "convey a mood and invite a relaxed frame of mind." Assembly rooms had actually become multiple use spaces and were more effective with flat rather than sloping floors. These spaces also played a role in the visitor's "transition from 'outside' into the park atmosphere." Exhibits might require artificial light for curatorial purposes, but they also benefited from a little daylight "to avoid claustrophobia." Finally, information counters could only function effectively at the minimum height requirements suggested, and portable counters were often most useful.[54]

In his discussion of visitor center placement, John B. Cabot, supervising architect for the EODC, described three potential locations. An entrance visitor center established the mood of the park and introduced the visitor to "the total interpretation of park values." The "en route" center posed the problem of simultaneously introducing the visitor to the park and providing information about the site to be visited. Most common was the "terminal visitor center," located at a popular destination, which supplied the visitor with a summary of park values while incorporating relevant information about the area; architects of these centers were encouraged to make use of surrounding views in their designs. According to Cabot, the location of the visitor center influenced the development of the building program because placement "affects how, in what sequence, the story is told, as well as how much or how little." This narrative depended, to a great extent, on the type of park under consideration. Whereas any of dozens of locations on the edge of natural areas might serve to orient visitors in wilderness parks, most historical parks could only be adequately understood with the help of interpretation presented in close proximity to the commemorative site. In a January 1960 report on visitor centers, the chief of interpretation commended the "desirable" siting of Colonial (Yorktown), which featured an "excellent view of the battlefield from the Seige Line Lookout on the roof of the visitor center," but criticized that of Grand Canyon, which stood midway between Mather Point and Grand Canyon Village, as "too far removed (1/3 mile) from the Canyon Rim . . ." Park Naturalist Shultz commented that "a visitor center should be 'in touch' with the feature it interprets."[55]

Once planners had chosen a building site, architects considered the park's story on a more intimate level. Cabot demonstrated how "visitor sequence diagrams" (flow diagrams) showed alternatives for visitor travel through a series of spaces; a typical example placed reception/ information (lobby) in the center, with the assembly (auditorium), toilets, administration, and interpretation (museum exhibits) areas grouped around it. In the diagrams, spaces were represented by circles of varying sizes. One alternative placed a circulation terrace between the various areas, allowing the visitor to choose his or her route. Cabot suggested that architects develop a sequence analysis, flow diagram, and estimates of spatial dimensions before eginning preliminary drawings. Such planning required a close working relationship between museum professionals and archtects, as indicated by Cabot's lengthy outline for visitor center design.[56] The "architectural treatment" of assembly or audio-visual rooms depended, in part, on mechanical systems and park programs. Funding for certain "audio-visual devices" became available in 1956, too late for incorporation into early visitor center plans, such as the Fort Frederica Visitor Center on St. Simons Island, Georgia. In the future, Ronald Lee recommended supplying architects with audio-visual related information, including descriptions of the devices, whether accommodations were needed for slide or film projectors, the audience's seating requirements, and the possibility of dividing auditorium space for several smaller presentations. Architectural consideration of such factors would lead to the development of "rooms which open from the lobby and which are separated from the exhibit rooms in order to keep the devices from distracting the visitor in his enjoyment of the exhibits."[57] Both Cabot and Lee encouraged architects to work closely with the interpretive branch and to contact consultants at the Washington Office for assistance in designing suitable spaces.

The professional partnership between Park Service designers and planners and interpreters and curators dated back at least to the creation of the Museum Division in 1935. During the planning stages of the Jefferson National Expansion Memorial, the Museum Division developed exhibits for the future museum and catalogued significant architectural fragments from the site as it was cleared for construction. In the early 1940s, architect Lyle Bennett wrote up a "Checklist for Museum Planning," addressing issues that would become relevant in his Mission 66 visitor centers designs. The close relationship between exhibit and architectural designers was strengthened by Tom Vint during the early years of Mission 66. Vint discussed exhibits at Grand Canyon with architect Cecil Doty, and it was typical for him to consult with Ralph H. Lewis or another museum expert on interpretive aspects of visitor center design.[58] Ten years after the official conclusion of Mission 66, Lewis published *Manual for Museums*, a technical handbook for curators on collections management. Although visitor centers are beyond the scope of the work, its frontispiece is a color photograph of the Mission 66 visitor center at Wright Brothers National Memorial. This "characteristic example of museums in the National Park System," was still a suitable representation of current Park Service curatorial standards nearly twenty years after its construction.[59]

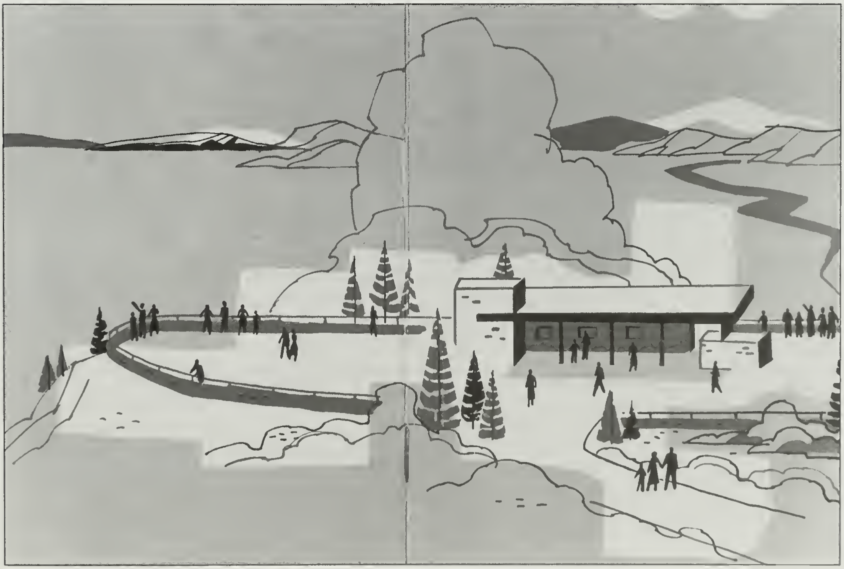
Mission 66 caused a surge of activity in the museum branch of the Park Service that led to the re-opening of the Western Museum Laboratory in San Francisco's Old Mint building.[60] Within months of its organization, the laboratory began work on exhibits for Quarry Visitor Center at Dinosaur National Monument, the Mission 66 building slated for a grand opening June 1, 1958.[61] Correspondence between the Division of Interpretation and the director indicates that Park Service museum professionals influenced the design of the center. The contract architects, Anshen and Allen, drew up exhibit plans based on the Western Museum Laboratory's requirements. In April, the Laboratory corrected some circulation problems in the construction drawings.[62] Since the museum professionals must have provided preliminary designs, other alterations may have taken place during the planning process.

The development of the visitor center not only increased the demand for museum work, but also opportunities to supplement traditional dioramas and displays with more innovative "hands on" exhibits and audio-visual productions. The Mission 66 report of 1956 noted that museums were frequently part of the administration building or visitor center and emphasized the great importance of museum collections in preserving "priceless national legacies." Audio-visual presentations were also seen as a means of reducing costs and presenting interpretive material more quickly and effectively. Improvements in mechanical systems and the production of high-quality 16 mm films were the wave of the future. This technology would replace more traditional museum exhibits—and change the role of museum professionals—in later visitor centers, such as the Headquarters at Rocky Mountain National Park, Colorado. Even the 1963 preliminary designs for this building featured an enlarged audio-visual room rather than exhibit space, demonstrating the transformation from museum-administration building to visitor center within the decade.

The cover of "Mission 66 in Action," a 1958 brochure promoting the program, features a streamlined, modern visitor center and viewing terrace dotted with visitors. Another drawing of a simple, rectangular visitor center building is pictured inside. Thirty-four of these new "focal points of park activity" had already been completed and twenty were under construction. By this time, the Park Service was on its way towards establishing standards for visitor centers, at least in terms of in-house examples. The design conference offered park architects important tips on early planning and guidelines for developing appropriate buildings. Park publications promoted modern materials for design, and during the early 1960s, Park Service personnel could look at their own publications for guidance.

Park Practice Design, a joint publication of the Park Service and the National Conference on State Parks, featured a rustic wood museum building in 1957, but qualified its praise with the observation that it had "limited application because of its architectural character and the fact that it would be relatively expensive to construct." These issues were no longer applicable in 1962, when the publication emphasized the centralization of functions, circulation of visitors, and presence of modern utilities in visitor centers at Pipestone, George Washington Carver, and Everglades. Writing for the Park Service newsletter *Guidelines*, Howard R. Stagner, chief of the Division of Natural History and a member of the original Mission 66 planning staff, compared visitor centers to modern businesses. The overwhelming purpose was luring people inside. Stagner noted the absence of any standard plan for visitor centers, since each varied according to its reason for being. Taken out of context, the visitor center had no inherent value, but placed near a point of interest, it became indispensable to the curious park visitor. By 1963, museum professionals described how the visitor center allowed the Park Service to "orient the public according to its own objectives." This was achieved through what had already become a standard set of

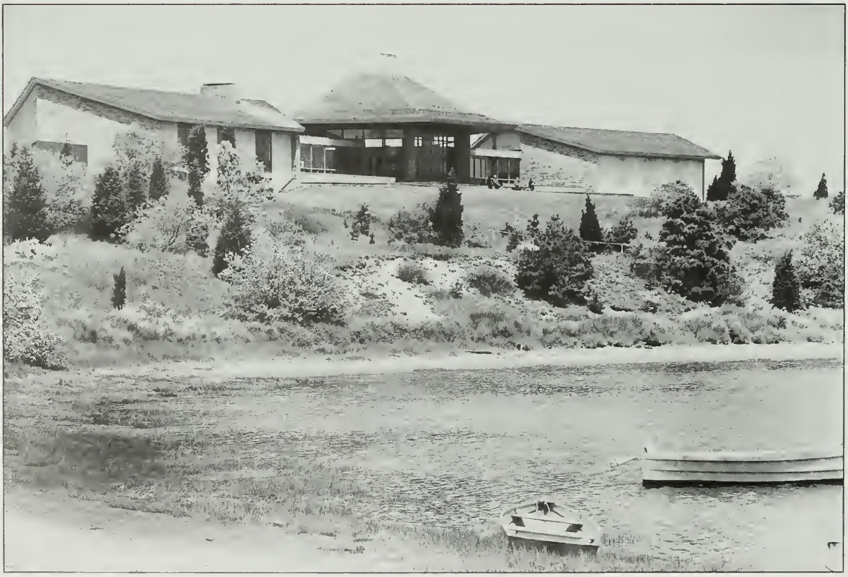
Figure 10. This abstract rendition of a visitor center appeared on the cover of the 1959 National Park Service brochure, Mission 66 in Action.



experiences: approaching the information desk, discovering one's location on a map, watching a narrated slide production, visiting the museum, taking in a view, and then proceeding down the road to a major attraction.[63]

During the last few years of Mission 66, both the EODC and the WODC experimented with visitor center plans that moved away from the centralized, single building model. The new designs were of two basic types—an entry lobby with distinct wings for other services and a series of independent buildings grouped around a courtyard or terrace. The visitor center and administration building at Saratoga, New York, designed by Don Benson and the EODC staff in 1960-1962, is an early example of this effort to clarify services and the circulation between them. Offices are housed in a hut-like space adjacent to a similar form containing a lobby and roofed terraces. These six-sided "huts" are connected by a corridor to the assembly/museum area, which is similar in plan and outward appearance. The exterior walls of all three areas are covered with beveled wood siding and the six-sided pointed roofs are protected by hand-split wood shingles. Although the Salt Pond Visitor Center (1964), Cape Cod National Seashore, Massachusetts, was based on a different plan and aesthetic treatment, it also effectively dispersed services into three distinct areas. EODC Architect Ben Biderman designed the visitor center with a central entrance lobby

Figure 11. Salt Pond Visitor Center, Cape Cod National Seashore. Courtesy National Park Service Technical Information Center, Denver Service Center.



between an audio-visual room and museum. The elevation reads as three separate buildings, but the two wings are connected to the lobby with glassed-in corridors. In contrast to the Saratoga Visitor Center, Salt Pond emphasized the character of each area with distinctive roof designs and wall treatments.

The WODC also began experimenting with alternatives to the centralized, single-building visitor center during the later years of the program. Cecil Doty produced a visitor center on the "three hut model" with pointed shake roofs for Curecanti Visitor Center (1965) in Colorado, but the building was completely re-designed by a contract architectural firm. The reverse situation occurred at Cabrillo Visitor Center, San Diego, for which Doty chose a more centralized plan that contract architect Frank L. Hope reconfigured as three separate buildings in 1965. In this case, the administration building, exhibits/ auditorium, and viewing/sales buildings were grouped around an open-air courtyard. Roughly contemporary with this design were the plans for the headquarters at Fort Raleigh, Cape Hatteras National Seashore (1964-1965), and the Kalapana Visitor Center at Hawaii Volcanoes (1965-1966; destroyed by a lava flow in 1989). The visitor center portion of Fort Raleigh was completely separate from the headquarters, a series of "pod-like" buildings. The Hawaiian structure featured an office building, comfort station, and exhibit room with attached lanai (porch). Both of these buildings, and perhaps not coincidentally most of these later visitor centers, made extensive use of wood shingles, built-up roofs, and decorative wood siding. Although "classic" visitor centers were still designed in the late 1960s, this move towards decentralizing visitor services appears to have been both a response to visitor circulation issues and a reaction to a design trend that would appear in school buildings and other public facilities during the late 1960s and 1970s.

THE SIGNIFICANCE OF THE MISSION 66 VISITOR CENTER

The Park Service Rustic style developed during the 1920s and 1930s established what was considered an appropriate design idiom for architecture and designed landscapes in national and state parks all over the country. The rustic image of the built environment in many parks came to be associated with the experience of nature itself; this powerful association remains strong in the public imagination even today.

During the Mission 66 era, the Park Service succeeded in reinventing this legacy for the postwar world. The Park Service Modern style—epitomized by the Mission 66 visitor center—once again led the way in establishing what was considered an appropriate approach to planning and designing the built environment in national and state parks. The new, modern image became widespread, and was adopted by many different park and public land management agencies all over the United States. As the national park movement spread worldwide in the postwar era, visitor center planning and the Park Service Modern style were often exported as well. Mission 66 and Park Service Modern became as influential in shaping postwar park planning as the New Deal and Park Service Rustic had been between the wars.

The Mission 66 visitor center remains today as the most complete and significant expression of the Park Service Modern style, and of the planning and design practices developed by the Park Service during the Mission 66 era. National park visitor centers symbolized new attitudes towards resource conservation, visitor responsibility, and Park Service stewardship. Cecil Doty alluded to such associations at a visitor center planning conference, noting that the "parking area, walks, terraces, and everything in and around the building are part of the Visitor Center ensemble, and are on exhibit as something constructed by the National Park Service. They can be more important than the exhibits themselves." In its form and its content, the visitor center was designed to represent the Park Service's modern image.

In many ways, the national park system as it is known today is a product of the Mission 66 program, and the planning and design theory it embodied. Mission 66 established the basic skeleton of the park system as we know it. Although the Park Service Modern style has been replaced by "neo-rustic" and other design styles inspired by prewar park architecture, the visitor center (whether one of the original Mission 66 buildings or a later addition) remains the central public facility for most national parks. Since the 1970s, the Park Service has struggled to become more aware of the environmental impacts of park development and public use; but many basic assumptions about how to plan visitor facilities have remained surprisingly consistent. Proposed or expanded visitor centers, for example, are often at the heart of even the most environmentally sensitive new plans for park management.

The following five visitor centers featured in this study are not only among the most ambitious Mission 66 projects of their type, they are also the work of significant American architectural firms that have made major contributions to the nation's architectural legacy. During the course of research, however, it became clear that this group of buildings was not only the work of famous architects, but also to varying degrees the result of collaboration with Park Service professionals. The Park Service was responsible for determining the programmatic requirements and circulation plans for the new building type, and Park Service architects established the building programs and completed preliminary planning and site development studies. During both the planning and construction stages, the same professionals offered advice and criticism, often significantly altering the contract architects' plans. As the following chapters will show, even Mission 66 visitor centers attributed to world-renowned architects were inextricably tied to the Park Service's idealistic Mission 66 program, and the values it hoped to communicate through architecture.

ENDNOTES

[1] Newton Drury, "The Dilemma of Our Parks," *American Forests* 55 (June 1949): 6-11, 38-39.

[2] President Truman also tried to obtain additional funds for the national parks in 1949, but his efforts were thwarted by Congress. See Elmo Richardson, *Dams, Parks and Politics* (Lexington: University Press of Kentucky, 1973), 40.

[3] "Jefferson Memorial Competition Winners," *Architectural Record* 103 (April 1948): 92-103.

[4] Sharon A. Brown, *Administrative History, Jefferson National Expansion Memorial Historic Site* (Department of the Interior, National Park Service, 1984).

[5] Bernard DeVoto, "Let's Close the National Parks," *Harper's* 207 (October 1953): 49-52. Many popular magazines featured stories warning the public of the dangers of visiting the parks and the slum-like conditions encountered within park boundaries. See Jerome Wood, "National Parks Tomorrow's Slums?" *Travel* 101 (April 1954): 14-16; Charles Stevenson, "The Shocking Truth About Our National Parks," *Reader's Digest* 66 (January 1955): 45-50. "Twenty-Four Million Acres of Trouble," in the *Saturday Evening Post*, took a slightly more sympathetic approach by featuring Conrad Wirth, and his ceaseless efforts to improve the Park Service despite inadequate funding. See *Saturday Evening Post* 3 (July 3, 1954): 32, 78-80.

[6] Dwight D. Eisenhower, *Mandate for Change* (Garden City, New York: Doubleday & Co., Inc., 1963), 549-550.

[7] William Nelson Noll, "Mission 66, the National Park Service Program for the Revitalization of America's National Parks, 1955-1966," (Master of Arts Thesis, Kansas State University, 1997), 11-12.

[8] Richardson, *Dams, Parks and Politics*, 111.

[9] Conrad L. Wirth, *Parks, Politics, and the People* (Norman: University of Oklahoma Press, 1980), 238.

[10] Lemuel A. Garrison, *The Making of a Ranger* (Salt Lake City, Utah: Howe Brothers, 1983), 255-56.

[11] Roy E. Appleman, *A History of the National Park Service Mission 66 Program* (Washington, D.C.: Department of the Interior, National Park Service, 1958), 2-32. Pilot studies were also conducted for Yellowstone, Chaco Canyon National Monument, Shiloh National Military Park, Adams Mansion National Historic Site, Fort Laramie, Everglades, and Mesa Verde.

[12] "A Survey of the Public Concerning the National Parks" (Princeton: Audience Research, Inc., December 1955).

[13] The final report was entitled "Mission 66, To Provide Adequate Protection and Development of the National Park Service for Human Use."

[14] Appleman, "A History of the National Park Service," 33-95.

[15] Henry-Russell Hitchcock, Jr., *Modern Architecture, Romanticism and Reintegration* (New York: Payson & Clark, Ltd., 1929); Henry-Russell Hitchcock, Jr., and Philip Johnson, *The International Style* (New York: W.W. Norton, 1932).

[16] Leonardo Benevolo, *History of Modern Architecture*, vol. 2 (Cambridge, Massachusetts: MIT Press, 1985), 643.

[17] Eric J. Sandeen, "The Design of Public Housing in the New Deal: Oskar Stonorov and the Carl Mackley Houses," *American Quarterly* 37 (Winter 1985): 645-667; Kristen Szylvian Bailey, "Defense Housing in Greater Pittsburgh, 1945-1955," *Pittsburgh History* 73 (Spring 1990): 16-28.

[18] Thomas S. Hines, *Richard Neutra and the Search for Modern Architecture* (Berkeley: University of California Press, 1982).

[19] This section, "Modern Architecture in the Parks," is based on discussions in Benevolo, *History of Modern Architecture*; Kenneth Frampton, *Modern Architecture, A Critical History* (New York: Thames & Hudson, 1985); John Jacobus, *Twentieth-Century Architecture, The Middle Years, 1940-1965* (New York: Frederick A. Praeger, 1966); William H. Jordy, *The Impact of Modernism in the Mid-Twentieth Century* (New York: Oxford University Press, 1972).

[20] Devereux Butcher, "For a Return to Harmony in Park Architecture," *National Parks Magazine* 26, no. 111 (October-December 1952). See also David Brower, "'Mission 66' is Proposed by Reviewer of Park Service's New Brochure on Wilderness," *National Parks Magazine* 32, no. 132 (January-March 1958); Weldon F. Heald, "Urbanization of the National Parks," *National Parks Magazine* 35, no. 160 (January 1961); Ansel Adams, "Yosemite—1958, Compromise in Action," *National Parks Magazine* 32, no. 135 (October-December 1958). That Butcher's opinions remained unaltered over the decade is indicated by his article, "Resorts or Wilderness?" in *Atlantic Monthly* 207, no. 2 (February 1961).

[21] Wirth issued a memorandum to the Washington office and all field offices announcing that field officials attending the Public Service Conference at Great Smoky Mountains (September 1955) "recommended that structures be designed to reflect the character of the area while at the same time following up-to-date design standards." He added that "park structures are to conform, to some extent, with the trend toward contemporary design and the use of materials and equipment accepted as standard by the building industry. However, restraint must be exercised in the design so that the structures will not be out of character with the area and so that the structures will be subordinated to their surroundings." See Conrad Wirth Papers (CWP), Box 6, American Heritage Center (AHC), Laramie, Wyoming.

[22] *National Parks Magazine* 29, no. 120 (January-March 1955), 4.

[23] Ernest Mickel, *Architectural Record* 120, no. 2 (August 1956), 32. *The New York Times* also picked up the story, reporting Park Service officials stating that "...the national parks were maintained as showcases for natural attractions," and therefore "Mr. Wright's 'modernized type' of building would be out of place among Yosemite's trees and glacier-cut rock cliffs..." See *The New York Times* (December 1, 1954).

[24] Jonathan Searle Monroe, "Architecture in the National Parks: Cecil Doty and Mission 66," (Master of Architecture thesis, University of Washington, 1986), 82.

[25] "Address by Conrad L. Wirth, Director of National Park Service, at the Dedication of Badlands National Monument and Mission 66 Facilities on Wednesday, September 16, 1959," "Speeches, 1959," CWP, AHC, Laramie, Wyoming.

[26] Appleman, "A History of the National Park Service," 16-17. Wirth reprinted this statement in his memoirs. See *Parks, Politics and the People*, 242.

[27] Emerson Goble, "Architecture (?) for the National Parks," *Architectural Record* 121, no. 1 (January 1957), 184.

[28] *Grist*, a publication of the National Conference on State Parks in cooperation with the National Park Service, Department of the Interior (September-October 1957; July-August 1958; November-December 1958). The story on concrete was written by the Portland Cement Association and that on asphalt by the Asphalt Institute.

[29] Douglas Haskell to Conrad L. Wirth, October 19, 1956, Box 25, CWP, AHC.

[30] Jack Goodman, "Controversy Over Lodge in the West," *The New York Times* (August 7, 1955); Dan Morrill, "No Daub, No Wattles: Coquina Beach at Nags Head to Feature Modern Trend in Architectural Ideas," *Virginian-Pilot* (July 22, 1956); *Progressive*

Architecture 37, no. 1 (January 1956): 92. Donald F. Benson (1921-) grew up in Ottawa, Illinois, and graduated from the University of Illinois with an architectural degree in 1951. Benson's work for the Park Service began in 1953, when Charles Peterson hired him as an architect in the Philadelphia office. During Mission 66, Benson worked for the EODC under John B. Cabot, designing and supervising the design of visitor centers at Everglades National Park, Saratoga, and Hopewell Village (now Hopewell Furnace), among other locations. Benson is now retired and living in Lakewood, Colorado. Interview with Donald F. Benson by the author, March 9, 1999, Lakewood, Colorado.

[31] Wolf Von Eckardt, "The Park Service Dares to Build Well," *Washington Post* (March 29, 1964); Lois Craig, et al, *The Federal Presence* (Cambridge, Massachusetts: MIT Press, 1979), 493.

[32] Thomas H. Creighton, "The Sixties: A P/A Symposium on the State of Architecture: Part II," *Progressive Architecture* 42, no. 4 (April 1961): 164-169; Jan C. Rowan, "Wanting to Be: The Philadelphia School," *Progressive Architecture* 42, no. 4 (April 1961): 131-163. Although use of the term "Philadelphia School" has become common among architectural historians, the label was invented by Jan Rowan; members did not necessarily consider themselves part of a cohesive group.

[33] "Two Visitors' Centers Exemplify New Park Architecture," *Progressive Architecture* 40, no. 2 (February 1959): 87.

[34] Skidmore, Owings and Merrill was founded in 1936 by Louis Skidmore and Nathaniel A. Owings. John O. Merrill joined the partners three years later. By the fifties, the internationally famous firm known for "spare, contemporary design" had offices in New York, Chicago, Portland, and San Francisco. Among its prominent buildings is the United States Air Force Academy in Colorado Springs, a commission sought by both Eero Saarinen and Frank Lloyd Wright. See John Peter, *Masters of Modern Architecture* (New York: George Braziller, Inc., 1958); Thomas J. Noel, *Buildings of Colorado* (New York: Oxford University Press, 1997).

[35] Richard W. Sellars and Melody Webb, *An Interview with Robert M. Utley on the History of Historic Preservation in the National Park Service—1947-1980* (Santa Fe: Department of the Interior, National Park Service, 1985), 30.

[36] "The National Significance of Pennsylvania Avenue and Historically Related Environs" (National Park Service, Division of History Studies, 1965). See microfiche document, Technical Information Center (TIC), Denver Service Center. For a brief discussion of the origins of the Pennsylvania Avenue historic site, see Ronald A. Foresta, *America's National Parks and Their Keepers* (Washington, D.C.: Resources for the Future, Inc., 1984), 134-135.

[37] U.S. Department of the Interior. *Our Heritage, A Plan for Its Protection and Use: "Mission 66"* (Washington D.C.: Government Printing Office, 1956).

[38] Conrad Wirth to Washington Office and field offices, memorandum, "Visitor Centers; Park Roads," February 10, 1956.

[39] "Summary of General Discussions of Visitor Center Design Problems," WODC, February 4, 1958, 7.

[40] Lewis, *Museum Curatorship in the National Park Service, 1904-1982* (Washington, D.C.: Department of the Interior, National Park Service, 1993), 128.

[41] These drawings are available on microfiche at the Technical Information Center, Denver Service Center.

[42] *Annual Report of the Secretary of the Interior*, 1953.

[43] These drawings are available on microfiche at the Technical Information Center, Denver Service Center.

[44] Building Maintenance Records, "Elevator Bldg. Carlsbad Cavern's N.P.," n.d., Carlsbad Cavern archives.

[45] *Annual Report of the Secretary of the Interior*, 1955.

[46] Superintendent's Monthly Reports [R. Taylor Hoskins, Superintendent], Carlsbad Caverns National Park, January 1, 1956, and March 3, 1956.

[47] "Address by Conrad L. Wirth, Director, National Park Service, Dedication of Visitor Center, Carlsbad Caverns National Park, New Mexico, June 12, 1959," "Speeches, 1959," CWP, AHC.

[48] *Annual Report of the Secretary of the Interior*, 1956.

[49] The Design and Construction Division benefited from student trainee and assistant programs that provided the WODC with 90 student architects, engineers, and landscape architects during the summer of 1956; EODC was supplied with 75 students. See *Annual Report of the Secretary of the Interior*, 1956.

[50] Herbert Evison, "Interview with A. Clark Stratton," March 1, 1962, National Park Service History Collection, Harpers Ferry Center. Although Stratton's comments are generally valid, especially for the second half of the program, the Park Service did design and manage visitor center projects that exceeded $200,000; whether or not expenses for these buildings exceeded the limit during the construction process is unknown.

[51] Utley in Sellars and Webb, "An Interview with Robert M. Utley."

[52] Wirth, *Parks, Politics and the People*, 278.

[53] U.S. Department of the Interior, *Mission 66, To Provide Adequate Protection and Development of the National Park System for Human Use* (Washington, D.C.: Department of the Interior, National Park Service, 1956).

[54] U.S. Department of the Interior, *"Visitor Center Planning, Notes on Discussions Held in EODC November 18-22, 1957 and WODC February 4-6, 1958"* (Washington, D.C.: Department of the Interior, n.d).

[55] "A Report on Visitor Centers" (Washington: U.S. Department of the Interior, ca. January 1960), National Park Service History Collection, Harpers Ferry Center.

[56] "Visitor Center Planning," 13-40.

[57] Ronald L. Lee, Chief, Division of Interpretation to Chief, EODC, memorandum, "Audio-Visual Space Requirements in Visitor Center Buildings," ca. November, 1956, Box 29, "WASO Design and Construction Correspondence," 1954-56, Regional Archives, Philadelphia, Pennsylvania.

[58] Lewis, *Museum Curatorship*, 108-142.

[59] Lewis, *Manual for Museums* (Washington, D.C.: Department of the Interior, National Park Service, 1976).

[60] "The Eastern Museum Laboratory increased its exhibit construction staff to about 30 and the Western Laboratory reopened with a staff of fifteen." In anticipation of over a hundred new visitor centers and the rehabilitation of exhibits in about forty existing museums, the Museum Division "planned laboratory facilities to maintain a permanent production rate of 250 exhibits per year." Another one hundred and fifty exhibits were to be obtained through contractors. See R. H. Lewis, draft, "Reexamination of the Museum Phases of Mission 66," National Park Service History Collection, Harpers Ferry Center.

[61] Lewis, *Museum Curatorship*, 153-4.

[62] John W. Jenkins to Director, May 6, 1958, in "Dinosaur Interpretive Plans, vol. I, Quarry Visitor Center Exhibit Plan," library, Denver Service Center.

[63] Howard R. Stagner, "Making the Visitor Center Work," *Guidelines* (National Park Service, November 1963): 75-77; Charles W. Warner, "The Interpretation of an Historic Area through the Original Environment and the Visitor Center," *Guidelines* (National Park Service, November 1963): 79-81.

CHAPTER I

QUARRY VISITOR CENTER

DINOSAUR NATIONAL MONUMENT, JENSEN, UTAH

Surrounded by the dry, rocky terrain of northwest Colorado and northeast Utah, over two hundred miles from any major city, Dinosaur National Monument is an unlikely location for one of the Park Service's most distinctive modernist buildings. Even before its completion in 1958, the "ultra-modern" Quarry Visitor Center at Dinosaur had become a model of Mission 66 design and achievement. Its glass and steel observation deck, concrete ramp, and cylindrical "tower" suggested scientific inquiry and sheltered working paleontologists.

The transformation of the monument from a paleontological site to a visitor destination worthy of such attention resulted, in part, from one of the country's bitterest conservation battles. The canyon near the confluence of the Green and Yampa Rivers was the preferred location for a Bureau of Reclamation dam, and had been eyed by the Bureau for inclusion in the Upper Colorado River Basin Project since the 1930s. Legislation passed to expand the monument in 1938 included provisions for future development of water resources. What appeared to be a matter of local water rights in the late 1930s, however, would become a topic of national discussion after World War II. If the value of Dinosaur National Monument lay in its paleontological site—the richest deposit of Jurassic remains ever discovered—its sudden notoriety came from the high canyon walls and rushing rivers that the river development project promised to transform into power, irrigation, and drinking water. The dam controversy touched the heart of the National Park Service by threatening its basic mandate to protect individual parks and the integrity of the entire system. It pitted governmental departments against each other. Even within the Park Service, staff members stood on either side of the issue. The public was equally divided. This was an era in which big water projects such as Hoover Dam were wonders of engineering constructed for public benefit. The importance of preserving scenic beauty didn't make sense to many state residents, who saw the monument as a barren wasteland, or to Mormons, who believed that creating an oasis in the desert was their mission and God's will. At the same time, as many Westerners demanded equal water rights, members of the growing national "wilderness movement" saw the Echo Park Dam development issue as an opportunity to prevent a loss equivalent to that of Yosemite's Hetch-Hetchy Valley.[1]

The Echo Park and Split Mountain Dams appeared a foregone conclusion to many by 1950, when newly appointed Secretary of the Interior Oscar Chapman scheduled hearings to discuss the proposals. Among the monument's supporters was Frederick Law Olmsted, Jr., the nation's foremost landscape architect, who warned that the loss of "scenic and inspirational values obtainable by the public" at the monument would be "catastrophically great."[2] Olmsted urged the Department of the Interior to choose an alternative site, even if it resulted in financial loss. Despite such pleas, Chapman supported the dam. The headline of the January 28 *Salt Lake City Tribune* read "Echo Park Dam Gets Approval." Less than a year later, the Park Service announced plans for a resort-like development at the new Echo Park and produced a sketch of Echo Park Lodge, a vast complex for 500 visitors estimated to cost $2,500,000. Park Service maps indicated the areas that would be flooded and showed the locations of both Split Mountain and Echo Park Dams and reservoirs.[3]

The Park Service may have given up the fight after the Secretary of the Interior's decision, but grassroots conservation groups refused to back down. Media attention had been building since the hearings, and in July 1950, an article by Bernard DeVoto informed over four million *Harper's* readers of a potential tragedy at Echo Park. Rather than appeal to a public sense of environmental responsibility, DeVoto addressed the question of public ownership.

> No one has asked the American people whether or not they want their sovereign rights, and those of their descendants, in their own publicly reserved beauty spots wiped out. Thirty-two million of them visited the National Parks in 1949. More will visit them this year. The attendance will keep on increasing as long as they are worth visiting, but a good many of them will not be worth visiting if engineers are let loose on them.[4]

DeVoto, a native of Utah, helped make the situation a popular issue, and once it reached a national forum new coalitions joined the conservationists. Californians protested that their water was being diverted, while Easterners declared themselves unwilling to pay taxes for western water projects. The campaign to save the canyon was given an additional boost in 1952, when David Brower became president of the Sierra Club. After seeing a film of the river, Brower made the preservation of Dinosaur his personal crusade. The new Sierra Club leader encouraged others to take up the fight by sponsoring river trips, producing his own film, and writing and speaking on behalf of the monument. Brower asked New York publisher Alfred A. Knopf to publish *This is Dinosaur*, a collection of essays by notable wilderness advocates intended to show "what the people would be giving up" if they accepted the dams.[5] Each member of Congress was sent a copy of the book, with a special brochure about the monument sewn into the binding. That Dinosaur was suddenly in the national spotlight is perhaps best illustrated by the 1954 movie, *The Long, Long Trailer*, starring Lucille Ball and Desi Arnaz; "Daisy" overloads the newlyweds' double-wide trailer with her favorite souvenir, a very large rock from Dinosaur National Monument.

Finally, in November 1955, Secretary of the Interior Douglas McKay announced that Echo Park would be removed from the Upper Colorado River project.[6] In March, both Houses approved water storage at three sites—nearby Flaming Gorge, Utah; Glen Canyon in Northern Arizona; and Navajo, New Mexico; the inclusion of Curecanti, Colorado, was contingent on further research. The threat of future development at Dinosaur remained, but for the present, the monument would be left alone. The Park Service quickly took advantage of this lull in the controversy to push for the long-awaited in situ visitor center at the now nationally famous site. Mission 66 came to Dinosaur amid this clash of ideals. In part because of the water project publicity, the Park Service chose to construct a monumental modernist building that demonstrated its commitment to the "protection and use" of Dinosaur National Monument.[7]

A SHELTER FOR THE QUARRY

In 1909 Earl Douglass discovered an amazing deposit of fossilized dinosaur bones in the remote and arid northeastern corner of Utah. Douglass, a paleontologist from the Carnegie Museum in Pittsburgh, established a camp at the site from which to begin excavating the valuable remains. Over the next few decades entire skeletons were removed and sent to museums throughout the country—approximately 700,000 pounds of fossilized bones to the Carnegie alone. These prodigious discoveries led President Woodrow Wilson to proclaim Dinosaur a national monument in 1915. About this time, Douglass envisioned a museum exhibit with "the skeletons which had been unearthed . . . mounted in relief on one side of the paleontological hall of the museum in the position in which they had been found."[8] A few years later, he preferred "a stately edifice in which there should be assembled plaster-casts of the dinosaurs which we have extracted from the spot."[9] Finally, in 1924, Douglass wrote what might easily have been preliminary instructions for the architects of Quarry Visitor Center:

> The uncovered area should be housed to protect the specimens and provide shelter for sight-seers and students. The north side would be a natural wall, of course, with the skeletons in place. The south side would probably be a natural wall also but the ends would have to be built and a roof with ample sky lights would cover the whole. The extra space and the walls could be utilized for many other exhibits from this most interesting geological and paleontological region.[10]

If Douglass was the driving force behind the visitor center concept, public servants in higher places had more influence over construction within the monument. George Otis Smith, Director of the U. S. Geological Survey, expressed his preference for an in situ exhibit as early as 1916, and by 1923 Secretary of the Interior Herbert Work imagined a similar situation and encouraged the Smithsonian to take on the project. Evidently, local residents believed that a building at the Quarry was eminent. The board of the Vernal Chamber of Commerce estimated that a shelter featuring a roof with three skylights and end walls of native rock would cost about $5,000. Although Work was unable to obtain approval for his scheme, he did attract the attention of Director Cammerer and members of the scientific community. Cammerer expressed concern over the amount of labor necessary to reveal exhibit bones and feared incurring additional expenses. Nevertheless, in 1924, Congressman Colton of Vernal introduced Bill 9064 to the 68th Congress in an effort "to properly house for its protection the Dinosaur National Monument."[11] Congress shelved the bill, but Colton continued to fight for a protective shelter.

Meanwhile, Cammerer focused on finding an academic institution to resume excavations in partnership with the park. Dr. Case of the University of Michigan Geology Museum, a group active in excavating the site, hesitated to reveal fossils that might deteriorate when exposed to the elements. Financial support was a problem for the university as well, and in 1925 Cammerer decided to halt excavation until something could be done to protect the bones. Finally, in 1930, the American Museum of Natural History in New York bargained with the Park Service for rights to fossilized remains in exchange for developing a public exhibit. Museum excavators would be allowed to remove any full skeletons they unearthed. The Depression ended hopes of building a museum in the early 1930s. However, a federal relief project resuscitated the excavation efforts in 1933, promising twenty workers. Even after the removal of funding in the spring of the next year, work continued under the Transient Relief Service of Utah. A temporary structure for the paleontologists, which also served as a museum, was constructed on the site in 1936.[12]

The relief work primarily involved "overburden removal," but as this task was accomplished the Park Service began planning for a new museum. Ned J. Burns, chief of the museum division, warned that "the building must be erected as soon as possible after this work has advanced to a stage where the fossils are located and enough exposed for identification." Not only did Burns anticipate potentially damaging water seepage, but also several features of the building. He thought the structure housing the in situ exhibit should be "entirely functional with ornamental treatment reduced to a minimum." The balcony opposite the rock face would allow visitors to observe excavation. In closing, Burns noted that "an in situ exhibit of the size contemplated will . . . achieve international fame," but warned the Park Service to obtain the necessary funds before beginning construction.[13]

Burns may have been referring to a preliminary design for a museum produced in January 1937, and, remarkably, the early proposal most similar to the Quarry Visitor Center. The project assumed collaboration with the American Museum of Natural History, the chief architect of WODC, and the director of the Park Service. Unlike successive designs of the 1940s, this scheme contains a circular foyer, apparently of concrete, which acts as a hinge linking the Quarry exhibit area with an optional office wing. The narrow museum building includes a library and curatorial office on the first floor, and stairs adjacent the foyer and at the far end of the museum lead up to a second-floor balcony space, enabling visitors to circulate without backtracking. In elevation, the building is simple and streamlined, with only a random stone facade as ornamentation. Its strip clerestory windows, flat roofs, and use of geometric forms is more characteristic of Mission 66 than the rustic architecture typical of the Park Service in the 1930s.[14]

Interest in the Quarry area appears to have increased in 1938, probably because the enlargement of the monument from eighty acres to three hundred and twenty-five square miles brought attention and financial support to the area.[15] Signs were installed on Route 40. In his inspection of the monument, Assistant Chief of the Naturalist Division H. E. Rothrock reported on the prospect of further excavation in the quarry: "This work cannot be undertaken until the plans and the exact location of the building which is to house the exhibit have been completed. These plans await the excavation of the fossil bed because the location of the building and its general design will depend upon the location, condition, and abundance of the fossil material which exists in the bone layer."[16] If funding for the building had been an obstacle in the past, it must have seemed impossible during World War II. Nevertheless, in April 1944, the Park Service produced two alternatives for museums in the Quarry area.

The preliminary sketch for a museum, designated 3-B as if in relation to the 1937 proposal, shows a more elaborate facility with a less modern appearance. The main exhibit room is a 60- by 160-foot rectangle composed of an in situ exhibit on the north side and exhibit cases or dioramas on the south underneath a second-story viewing balcony. Visitors traversed a winding path up the rock (and adjacent the road) to reach the main entrance to the building, entered a lobby with restrooms, viewed the quarry face, walked downstairs to the exhibit room, and then exited through a vaulted loggia on the first floor which also served as a truck entrance. The laboratory and preparation room was located in a one-story side wing jutting out from the front of the building, and additional offices were on the second floor of part of this wing. The building had a random stone facade and terraces but no significant ornament.[17]

A third museum proposal (drawing 3-C) wedged the building between the in situ quarry and the southern canyon wall, with a slightly undulating stairway providing access to the exhibit room, a second-floor mezzanine, and third-floor balcony. Offices were on the south side of the building and on the second floor. An optional skylight was included in the section, along with triple-height side windows. The general plan of the building qualifies it as an ancestor of the future Quarry Visitor Center, as does the basic circulation pattern. A quick glance at the elevation ends the comparison, however, as it is a massive three-tiered structure with vaguely Spanish details. One feature of note is the boulder-lined path that follows the entrance road up to the second-floor roof terrace.

Fortunately, the Park Service's financial situation did not lend itself to such an elaborate Quarry complex.[18] A temporary shelter was more realistic, and by 1951 plans were approved for a utilitarian structure resembling a warehouse or farm building. The north wall of the building consisted of the quarry face itself and a corrugated sheet metal shed roof protected paleontologists and visitors alike. Four equally spaced windows in the south wall above the entrance and one on the east side let light into the museum. The lowest construction bid was offered by Bus Hatch, a native Vernal "river man" who had guided boatloads of tourists through the canyons during the preservation effort.[19] Although a rather primitive wooden structure, this early museum was a precedent in situ shelter serving the required protective function. The new Quarry Visitor Center would not only borrow its method of bringing the site to the visitor, but also its utilitarian quality updated to showcase modern materials and modern scientific efforts. Whether or not the contract architects examined the temporary shelter is unknown, but Park Service designers were certainly influenced by the building.

Mission 66 brought new hope of fulfilling promises for the Quarry area development envisioned twenty years earlier. Park staff met with members of the regional office and the WODC for three days in May 1955 to discuss upcoming construction projects. The group agreed to push for immediate preparation of preliminary drawings for the "Quarry

Museum" and construction as soon as funds were available. Among those attending the meeting were Lyle E. Bennett and Robert G. Hall, both of whom probably contributed their design expertise to the committee's building description.

> The building is to be designed with a length of approximately 180 feet, covering a general area of the quarry as located on the ground. The building is to have a balcony on the south wall at a height which will give the visitor the best possible view of the quarry face and the in situ exhibit. Entrance and normal visitor exit of the building would be at the balcony level near the center of the south wall. The circulation pattern within the building is to provide for visitors traveling from the balcony to the ground floor for a closer view of the in situ exhibit and other related exhibits planned for installation under the balcony and elsewhere in the building.[20]

By March 1956, the Park Service announced that funds allocated for Mission 66 improvements at Dinosaur totaled $615,899.[21] According to Director Wirth, the money would be used for roads, a new $275,000 visitor center, employee housing, and water and sewer facilities.[22] In May, just a month before hiring contract architects, the park produced a "comment sketch" for a modern visitor center.[23] This drawing shows a two-story building with an upstairs lobby and spectator's balcony. The lower floor housed offices and work rooms arranged en suite and a visitor gallery, probably intended for exhibits. Visitor access to the building was from a broad stairway running parallel to the offices. No comments or elevations were included in the sketch. At this point, the park must have been seeking a private architectural firm for help in designing the building. By mid-summer, work had begun on a guard rail at Harpers Corner, parking lots, and concrete channel crossings. Bidding began on water and sewage improvements and grading the residential housing in the quarry area.[24] Over the winter, Park Naturalist John Good envisioned the improved situation at the site, which would allow visitors to "whisk up a paved road to the quarry instead of walking up the hot, dusty trail that has been used for so many years."[25] If a paved road seemed such a luxury, Good could hardly have imagined the imminent transformation of the quarry from a temporary camp into a modern laboratory and visitor center.

In preparation for the new building, the Park Service removed facilities constructed during the 1930s. The museum section of the old headquarters was "cut from the naturalist's quarters portion and skidded across a narrow bridge and placed at its new location about a mile from its original site," an achievement "deemed impossible."[26] The park went to great lengths to replicate the quarry exhibit by installing a temporary contact station at Neilson Draw and building a trail up to in situ interpretation at Dinosaur Ledge. Fossilized backbones and large leg bones were exposed in the ledge area, and a ranger naturalist stationed at the site simulated excavation.[27] Throughout the construction, park personnel and local boosters described every step of progress in anticipation of a visitor center "distinctly different in design from anything at present constructed in other national parks." Park interpreters were optimistic that the new facility would finally provide an appropriate setting for modern paleontological research. For the next several years, visitors would witness actual excavation by professional paleontologists. This demonstration would be supplemented by a series of "exhibits, explaining what dinosaurs are, the world they lived in, the geological events following their death, discovery and working the quarry, and methods of preparing specimens." The visitor center would include laboratory facilities, such as a "preparation room for work on the bones, a technical library, storage space for study of collections, and a fully equipped darkroom."[28]

ANSHEN AND ALLEN, ARCHITECTS

> Already the authors of a most stimulating and satisfactory building in one of our National Monuments (Chapel of the Holy Cross, Sedona, Arizona, *Architectural Record*, October 1956), architects Anshen and Allen have now designed an arresting and appropriate visitor center to house an "in-place" exhibit of America's largest deposit of dinosaur fossils.[29]
>
> -*Architectural Record*, January 1957

The year Echo Park was saved, the San Francisco architectural firm of Anshen and Allen designed its most famous building, a small chapel in the Sedona desert. S. Robert Anshen and William Stephen Allen began private practice together in San Francisco about four years after their graduation from college in 1936.[30] Former classmates at the University of Pennsylvania, Anshen and Allen worked as a team, sharing the responsibilities of design and engineering. From the beginning, Anshen and Allen espoused no particular style or architectural methodology, but prided themselves on creating the "variety" that evolved naturally out of clients' desires and programmatic requirements. One of the partners' notable early buildings was a house designed in Taxco, Mexico, for Sonya Silverstone (1949). An article describing the residence inspired Marguerite Brunswig Staude to contact Anshen and Allen about the possibility of building her dream chapel in Sedona, Arizona.[31] The architects must have been intrigued when Staude, a sculptress, showed them her sketches of a Roman Catholic Church inspired by Rockefeller Center, a version of which was almost constructed for Hungarian nuns on Mount Ghelert in Budapest. Anshen and Allen began working on the chapel project in 1953.[32] Staude not only financed the chapel, but also provided accommodations for the architects at her Doodlebug Ranch in Sedona. When it was time to find an appropriate site, Staude, her husband, and the architects flew over the local hills in search of the perfect location. This type of collaboration between architect and client would also occur in the firm's work for the National Park Service.

The Chapel of the Holy Cross, a concrete and glass structure designed around a colossal cross, was built into dramatic red rock formations overlooking the town of Sedona. A serpentine concrete ramp leads the visitor out of the parking area and up to a courtyard in front of the chapel. Through the paned-glass entrance facade, the view extends to the concrete cross spanning the building's opposite wall and to clouds outside that seem to float above the altar. Anshen and Allen's chapel received praise in architectural journals, popular magazines, and newspapers soon after its construction.[33] Park Service architects must have known about this unusual structure located a short distance from Montezuma Castle National Monument and the monuments near Flagstaff—Sunset Crater, Wupatki, and Walnut Canyon. The chapel's textured concrete walls and sinuous ramp would foreshadow a similar use of concrete at Quarry Visitor Center. The glass wall that so successfully brought the outdoors into the building would be adapted to the conditions of the park site. Perhaps most important, the designs of both buildings would accommodate living rock. In its unadulterated simplicity, the chapel makes the most of modernist design, and Park Service architects might very well have hoped to see its secular equivalent in a national park. *Architectural Record* clearly saw the connection between the chapel's setting and the design challenges inherent in a park environment. The journal concluded its October 1956 story on the chapel with the following prediction:

> It may fall to the lot of other architects to work with sites of similar grandeur, if plans for the Mission 66 program of the National Park Service do lead, as planned, to a substantial building program in the national parks. NPS and its concessioners in the parks will be dangling before architects just such problems in scale, in awesome scenery, color, lighting conditions. In an earlier day rusticity was the accepted answer, or chalet importations from another mountainous land. Contemporary architecture has not had much opportunity to test its tenets in such terrain, or, too much success when it has had the chance. The design of this chapel seems to suggest a better approach than we are used to in our national parks.[34]

Regardless of the Park Service's admiration for the Sedona chapel, initial contact between architects and client appears to have occurred as a result of the Mission 66 effort to find suitable contract architects for visitor center commissions. The WODC advertised its need for architects and, about six months after Anshen and Allen interviewed at the San Francisco office, the firm was hired to design Quarry Visitor Center. The partners chose Richard Hein as project architect.[35] From the beginning, a certain amount of collaboration was implied, but Anshen and Allen welcomed the challenge offered by their unusual client. In accepting the project, the firm was taking on decades of in-house planning, not to mention the responsibility of an early high-profile Mission 66 project. Anshen and Allen soon realized that the Park Service's expectations for its new building were influenced by the traditional park museum model; preliminary Park Service designs depicted a fully enclosed, windowless building lit exclusively by artificial light. When Anshen visited the site, he recognized the importance of opening up the building so that people could see the environment surrounding the covered quarry section. Together, Hein, Anshen, and Allen begin to plan an exhibit shelter

> as open as possible in order to achieve a maximum integrated relationship of the remains to the site. The shelter was conceived as a totally glazed structure. This conception had the additional advantage of creating the least intrusion of the building on its natural surroundings which had been one of the Park Service's principal requirements. The administrative and utility areas were to receive a subordinate location and treatment to the main Exhibit Shelter in order to detract as little as possible from the public's view from the site.[36]

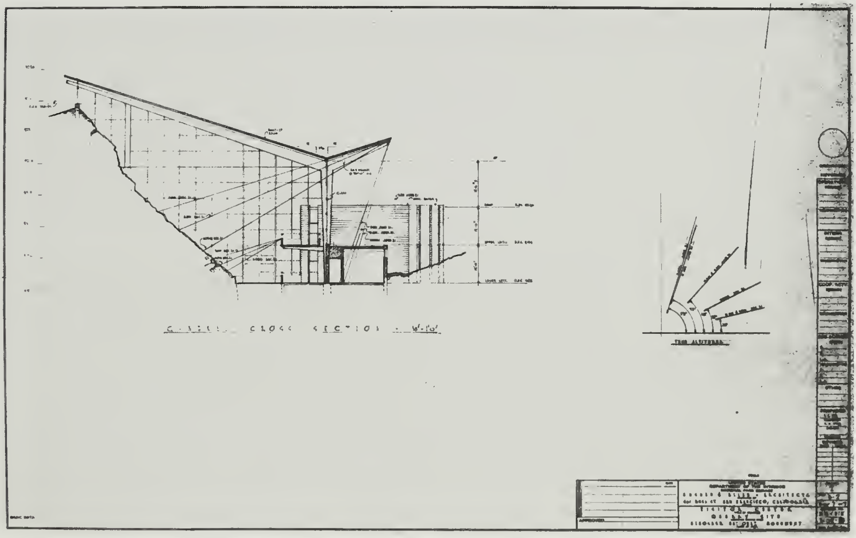
Technical aspects of the design were addressed by Robert D. Dewell, a civil and structural engineer based in San Francisco.

According to project architect Hein, the original concept for the visitor center made use of the site's natural landscape features by spanning the "v-shaped cut" in rock formations with "a series of suspension cables on a catenary curve."[37] Because the region's severe climatic conditions fluctuated up to 150 degrees throughout the year, the architects were forced to abandon this plan. The new scheme evolved from the original idea, but supported the asymmetrical butterfly roof with a more substantial rigid frame system. This solution solved the basic requirement of covering the quarry face, but departed radically from the Park Service's shed-like design.

Quarry Visitor Center was an original design by Anshen and Allen but it was also a collaborative effort with the National Park Service. In an oral history interview over twenty years later, Cecil Doty not only took credit for the original design, but remembered details of the collaboration process. With drawings to illustrate his points, Doty showed how he revised the building plans "on the basis of my second preliminary [drawing]" after Ronnie Lee pressured him to remove all glass from the exhibit gallery and make provisions for artificial lighting. Doty claimed that Anshen and Allen restored the glass, borrowed his shell and truss design, and then "went high tailing to Washington" and got approval for the building. As this controversy illustrates, work between private and Park Service architects often blurred the lines between client and architect.[38] In a feature article on "Recent Work of Anshen & Allen," *Architectural Record* described the building in glowing terms as a highly successful revision of "the Park Service's original design."[39]

The firm produced a seven-sheet set of preliminary drawings in July 1956. Because of the large amount of glass in the plans, preliminary drawings included diagrams indicating the angle of the sun at various months and hours. "Sun patterns" were shown in plan and cross section. These solar studies were directly related to building features, such as the shape and extent of roof overhangs. The building consisted of three main areas: the concrete cylinder or "circular element" housing facilities for visitors, including the lobby, restrooms, and service staff; the one-story administrative office and laboratory wing; and the double-height gallery, which included the fossil exhibit. From the parking lot, visitors entered by following the concrete ramp as it wrapped around the cylindrical building and emerged adjacent the entrance to the exhibit area. The two floors were connected by a narrow stairway in the rotunda and by a stairway at the far end of the gallery; visitors were intended to use the ramp entrance, discover the restrooms to the left of a small lobby, walk along the upper gallery and then take the stairs down to the lower viewing area. This gallery included a window into the paleontologists' preparation and storage room, part of the administration wing. The first floor also housed the library and conference room, geologist's office, darkroom, employee lockers, and mechanical equipment. Visitors concluded their tour of the lower gallery at another lobby space, now a crowded bookstore. Additional Park

Figure 12. A cross section of Quarry Visitor Center showing the position of the sun at various times during the day. This was part of a seven-sheet set of preliminary drawings completed in July 1956. Courtesy National Park Service Technical Information Center, Denver Service Center.



Service offices were arranged in the semicircle around the lobby. The exit was located at the far end of the exhibit space. This route provided efficient circulation through the building and back to the parking area.

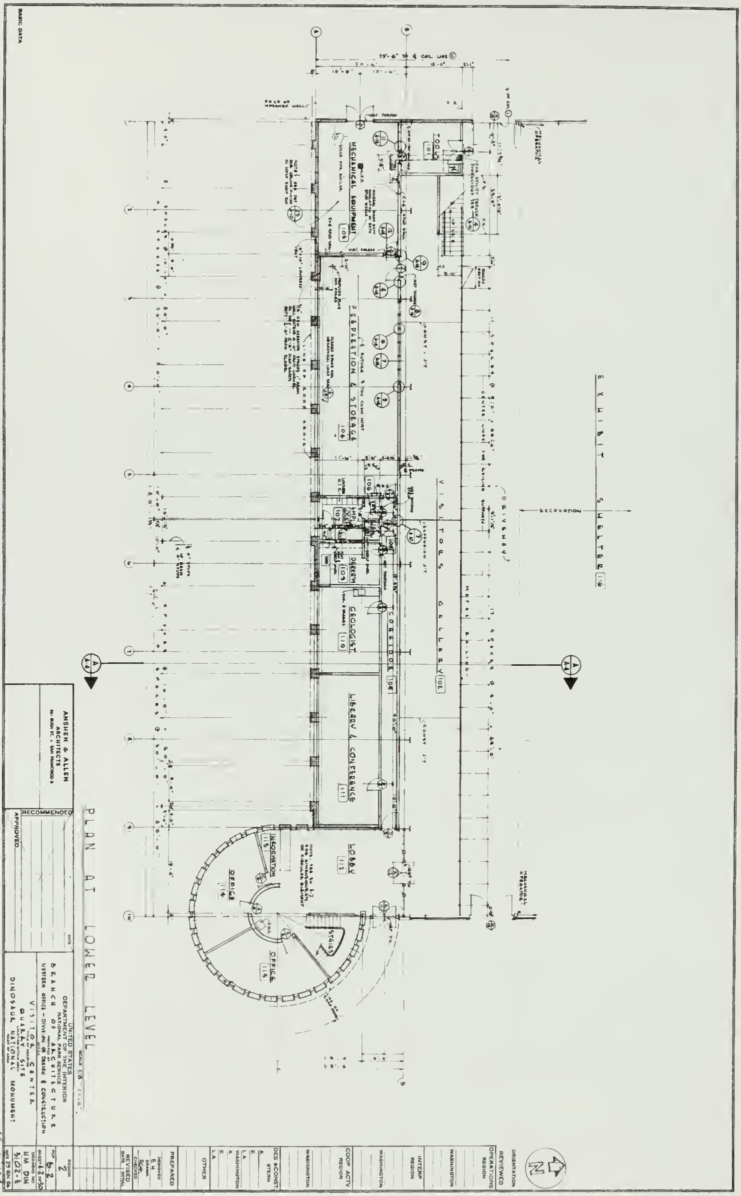
Evidently, Director Wirth was not entirely pleased with the preliminary drawings and, in July, refused their approval. Anshen responded by offering to "restudy the problem in accordance" with Wirth's comments.[40] The acting chief of design and construction reported his extreme doubts that a building satisfying the desired functional requirements could be designed and built with the available funds. As the architects worked on revisions over the next few months, they also demonstrated that their glass and steel building could be completed within the alloted budget.

The form of the gallery covering the fossils appears to have been determined relatively early in the design process, but the cylindrical administrative building proved more contentious. The architects produced at least ten versions of the ramp and cylinder, with variations in the treatment of "skin" covering the two-story office space, the size and shape of the ramp and its termination. These are all drawn in soft pencil, with a similar background treatment, as if part of a series.[41] The most significant variations occur in the concrete pattern of the cylinder; the architects varied the spacing of verticals, in one case leaving half the wall completely smooth and in another proposing a textured wall of concrete block. Ramp possibilities ranged in the extent of curve—including an example that seems almost level. The architects experimented with the ramp entrance and toyed with the idea of a series of steps part-way up the ramp. As Stephen Bruneel, senior associate of Anshen and Allen, speculated in 1999, the drawings suggest that "the final round form of the admin/service wing was arrived at early on, but that there was uncertainty or resistance either within the firm or with the client. The result causing a long detour before the original scheme was returned to."[42] This "resistance" was most likely directed at the building's function, rather than its modernist aesthetic, and resulted primarily from the museum department's desire for traditional, enclosed exhibits.

Ronald Lee's Division of Interpretation preferred the use of artificial lighting in the visitor center, and his influence was a determining factor in early in-house conceptions of the building. An enclosed, darkened exhibition space would allow museum technicians to employ dramatic lighting affects without any external distractions, create a sense of mystery, and propel visitors back to the time of the dinosaurs. However tempting such a performance might have been for the museum division, this traditional approach to exhibition defeated the purpose of a site specific exhibit. Visitors could not see the relationship between the enclosed part of the quarry and the continuing rock face outside. As Hein subsequently explained, "the Park Service design, while being suited to the normal concepts of museum planning, was failing to recognize the unique aspects of this particular project."[43] By August 1956, when Anshen and Allen had already submitted the first sketches of their glass-walled building, members of the museum and park staff had not only changed their minds about the display technique but were arguing for a building "as light and open as possible. . . with glass ends." Although such a design was part of the Mission 66 planners' early concept, the museum branch's preferences had influenced preliminary planning and resulted in the alterations that so disappointed Cecil Doty.[44]

Despite strong approval from the WODC, Anshen and Allen's design had undergone revisions since its preliminary stage, and the architects were required to re-submit their plans to the park superintendent, regional office, museum branch, and Washington office. As Hein recalls, Director Wirth was torn between the opinion of the museum experts and that of the WODC. Wirth scheduled a design presentation in the San Francisco office, and after hearing the strong support of the Park Service architects firsthand, he accepted their consensus even though the working drawings submitted in November 1956 displayed no significant changes. The cylindrical element featured a pattern of vertical lines made by alternating strips of insulated glass, concrete panels, and areas of concrete masonry.[45] Its composition roof was topped with a plastic skylight. But the highlight of the design was certainly the massive glass wall on either end of the building. More than the butterfly roof or concrete ramp, the extensive use of glass and steel created an atmosphere suggestive of modern innovation. Porcelain enamel sandwich panels were installed near the base of these walls. The drawings also included plans for the traveling scaffold that was to be part of the working exhibit. The air conditioning and radiant heating systems were handled by Earl and Gropp, electrical and mechanical engineers based in San Francisco.

The "finish and color schedule" for the visitor center paints a colorful picture of the building's original interior surfaces. The visitor gallery walls and trim were surf green and the ceiling vernal green. The lobby was surf green with varnished birch trim, and the rotunda and stairway were also green. Offices had walls painted starlight blue and honey beige. Less significant spaces, such as corridors, vestibules, and storage spaces, were tusk ivory. These brightly painted surfaces were intended to relieve the monotony of the valley's gray surroundings and, perhaps, create the effect of an oasis in the desert. A similar effort would be made at the new facility in Petrified Forest National Park a few years later.[46]


BASIC DATA
EXHIBIT SHELTER 116
EXCAVATION
DRIVEWAY
VISITORS GALLERY 102
CORRIDOR 106
TOOLS 101
MECHANICAL EQUIPMENT 103
PREPARATION & STORAGE 104
DARKROOM 109
GEOLOGIST 110
LIBRARY & CONFERENCE 111
LOBBY 112
INFORMATION 113
OFFICE 114
OFFICE 115
STAIRS
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ANSHEN & ALLEN ARCHITECTS
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NATIONAL PARK SERVICE
BRANCH OF ARCHITECTURE
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VISITOR CENTER
QUARRY SITE
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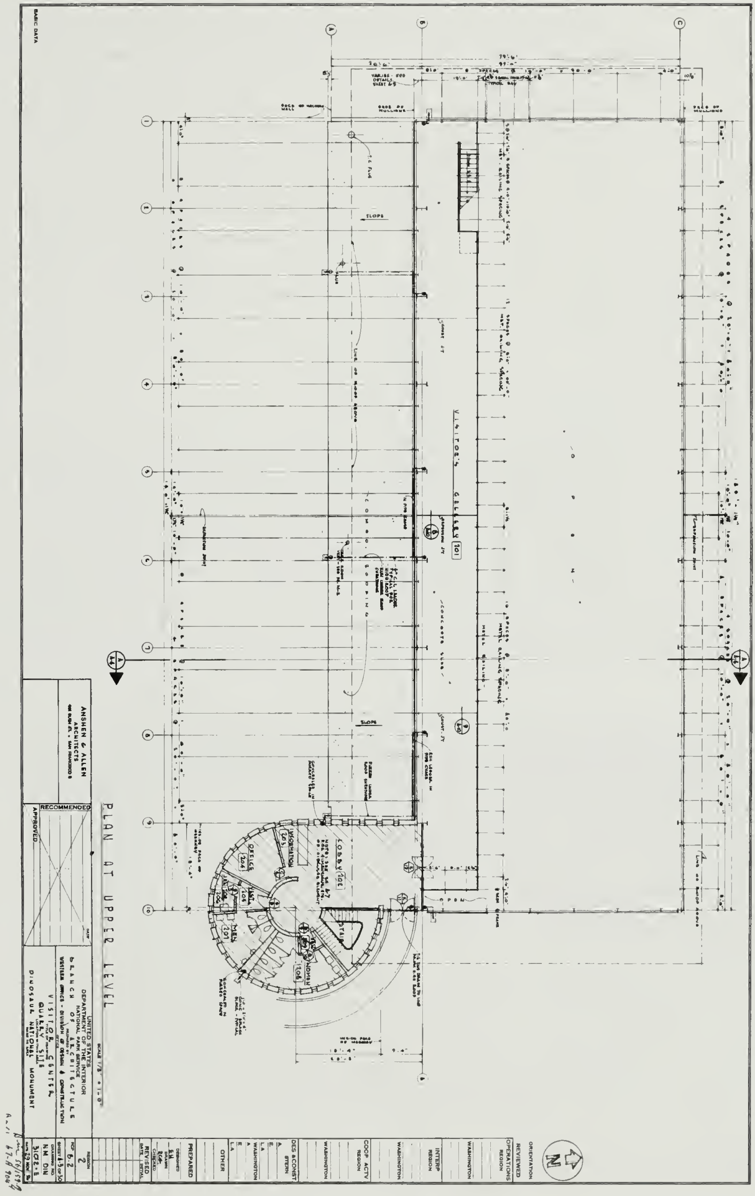
Figures 13 and 14. Quarry Visitor Center, lower and upper levels, from the set of working drawings submitted in November 1956. Courtesy National Park Service Technical Information Center, Denver Service Center.


PLAN AT UPPER LEVEL
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LOBBY 202
INFORMATION 203
OFFICE 204
MEN 201
WOMEN 206
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SLOPE
LINE OF ROOF ABOVE
ANSHEN & ALLEN
ARCHITECTS
SAN FRANCISCO
RECOMMENDED
APPROVED
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF ARCHITECTURE
WESTERN OFFICE - DIVISION OF DESIGN & CONSTRUCTION
VISITOR CENTER
QUARRY SITE
DINOSAUR NATIONAL MONUMENT
ORIENTATION
REVIEWED
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During planning for the visitor center, the architectural firm was also busy with designs for employee housing and a utility building in the quarry area below the visitor facility. In June 1956, Hein drafted plans for the site, showing three residences and a four-unit apartment arranged in a small cul-de-sac of the road leading to the maintenance area. The buildings were one-story and the pitched roofs covered with asbestos shingles. A redwood fascia encircling the building under the roof line provided a decorative touch. Floors were specified as slabs covered in asphalt tile, and sidewalks and patios were of colored exposed aggregate concrete. Various drawings indicate that Park Service architects helped with this typical Mission 66 housing.[47] The concrete block utility building included areas for carpentry, auto maintenance, and equipment storage.[48]

BUILDING THE VISITOR CENTER

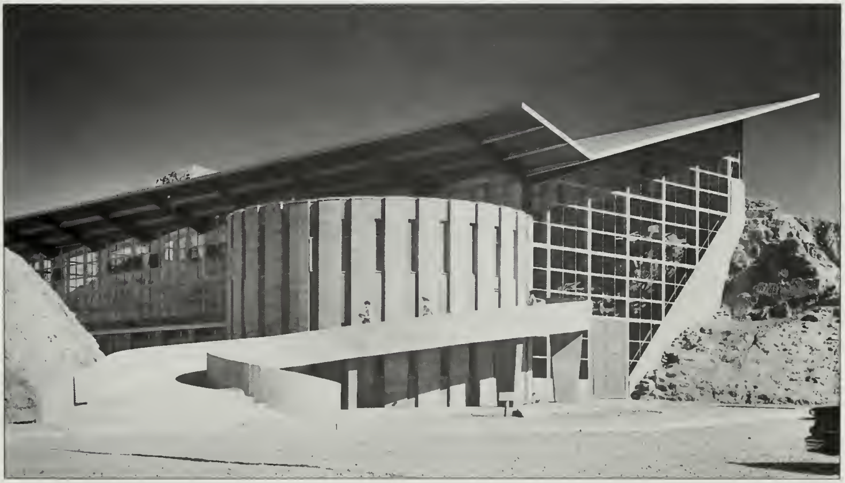
The park sent out invitations for bids on construction of the visitor center in early February 1957, and by the closing date of March 19, had received multiple offers.[49] On April 23 the Department of the Interior issued a press release announcing that R. K. McCullough Construction Company of Salt Lake City would build the $309,000 building, which promised to be "distinctly different from those in other national park areas." In the second week of May, Park Service Project Supervisor R. Neil Grunigen reported that the McCullough Company was "erecting a field office, staking out the building and removing the old quarry structure." Excavation for the employee housing near the quarry was complete and contractors were beginning the concrete form work. Grunigen shared his reports with Superintendent Lombard and both consulted Lyle Bennett, WODC supervisory architect, on issues requiring official approval.[50]

After a month of work, the superintendent complained of slow progress—only fifteen percent of the site had been excavated—and the McCullough Company demanded a meeting with the architects. According to construction representative Lee Starke, delay in the delivery of structural steel resulted in early setbacks, as did waiting for Anshen and Allen to select colors for the block and concrete. By June, the contractors had excavated footings in preparation for beginning "forming and concrete work."[51] R. K. McCullough's superintendent, Duard Davis, had already requested an extension of time because revised drawings for the foundations had not been approved, delaying the order of structural steel. In the meantime, a local Vernal firm, Intermountain Concrete Company, began work on a contract for "roads and parking areas, bridge, base course, colored concrete and curb and gutter, timber guard rail, overlook and walk."

Despite the slow start, Superintendent Lombard reported much progress that Fall. The foundation wall was in place and exterior concrete "treated with acid to create a 'pebble' effect to blend with the rocky background."[52] Newspaper accounts reported details of the building's concrete construction—its glass walls with customized sun filters, and the fourteen-foot ramp wrapping around the side of the tower. By November, the structural steel framework had been erected and steel window sashes installed. Anshen and Allen selected "Mirawal's royal blue no. 202" as the color for the porcelain panels on the east elevation. Without its glass, the roof appeared a delicate steel cage. As winter approached, the "roof sheathing was on all the roofs and the built-up roofing applied on the circular element and low-wing areas."[53] Park Naturalist John Good reported that the building shell was "truly a massive thing."[54] In the month of December work shifted to the interior of the building, as contractors prepared to install wall coverings.

In his "narrative statement" on the building construction, Lee Starke mentioned the excellent relationship between the job superintendent and the contractor, who actually altered problematic aspects of the building without charging the government. A Mission 66 progress report written in March 1958 described the "exemplary accomplishment," emphasizing such technical details as the "Dusklite glass" panel walls of the exhibition hall that would "eliminate the reflection of the summer sun from the adjacent hills."[55] Quarry Visitor Center was completed on May 9, 1958. Along with the upcoming dedication of the building came news that Dinosaur might become a national park; coincidentally, the bill to achieve such status was part of the proposed Sputnik bill.[56]

Figure 15. Quarry Visitor Center, view from parking lot, ca. 1958. Photo by Art Hupy, courtesy of Richard Hein.



The official dedication of Quarry Visitor Center, "Dinosaur Day," began at 2:00 p.m. on June 1. Guests gathered as the Uintah High School band played a celebratory prelude. After Governor George D. Clyde and Superintendent Lombard welcomed guests, Dr. LeRoy Kay, formerly of the Carnegie Museum, spoke about the natural history of the dinosaur quarry. Assistant Secretary of the Interior Roger C. Ernst delivered the dedicatory address. The ribbon cutting ceremony, a tour of the building, and a river boat trip followed. According to newspaper accounts, sixteen hundred people attended the event.

During the dedication ceremony, the architects appear to have become displeased with the color of the porcelain enamel panels located between the lower level entrance door and the maintenance door on the east facade. They offered to replace the nine blue panels with clear glass. Superintendent Lombard accepted the offer on the condition that the Park Service not incur additional expenses, but the firm was not

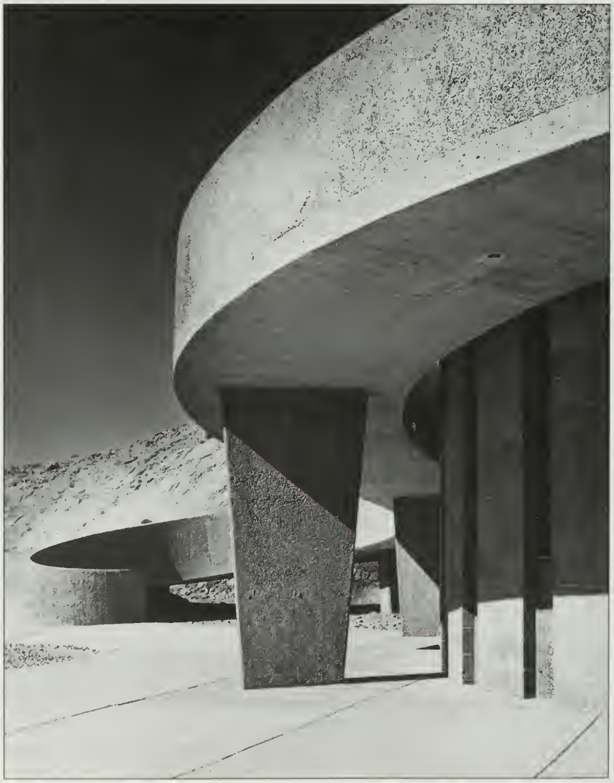


Figure 16. Quarry Visitor Center, view from beneath ramp, ca. 1958. Photo by Art Hupy, courtesy of Richard Hein.

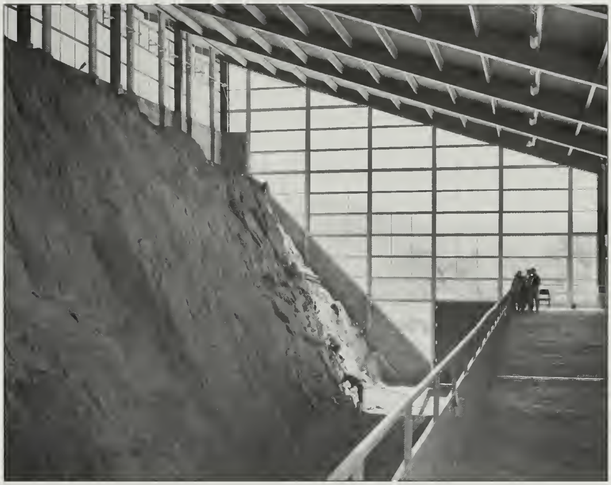


Figure 17. Quarry Visitor Center, quarry face and upper level visitor gallery, ca. 1958. Photo by Art Hupy, courtesy of Richard Hein.

willing to alter the building's aesthetics free of charge. The park eventually paid for this change.

In a report to the regional director, Superintendent Lombard noted that the public reaction to the building had been "most favorable" and that the park staff was "justly proud."[57] The building was featured on the cover of the July-August *Geotimes*, a magazine published by the American Geological Institute. For this organization, the building was much more than a Mission 66 achievement. As "the only place in the world where visitors can see bones in the rock and watch paleontologists at work," the building was a landmark educational facility.[58] For the architects, the design brought "national recognition" and "opportunities that made them a leading California firm."[59]

IN SITU INTERPRETATION

Considering the museum division's early role in the design of the building, it's not surprising that Anshen and Allen worked with the Western Museum Laboratory in San Francisco on exhibit plans throughout the visitor center. By design, the architecture of Quarry Visitor Center also involved museum interpretation; one wall of the building was an exhibit. The exhibits planning team submitted its designs for the lobby installations on May 3, 1957.[60] The interior walls of the lower gallery were to be furred and faced with gypsum board in preparation for painting. Exhibits were installed in recessed cases, shadow boxes, and in diorama form. A year later, the architects submitted preliminary drawings for the exhibit installation, plans that were not immediately accepted by Superintendent Lombard. According to John W. Jenkins, chief of the Western Museum Laboratory, museum staff red-lined the architects' drawings with suggestions for spacing between panels to improve visitor circulation, and although Anshen and Allen approved the changes, work on construction drawings awaited further discussion with the superintendent. Jenkins supported the firm's basic concept and praised the "excellent and very attractive plan . . . which would differ from most of the recent National Park Service installations . . ." In the meantime, Jenkins realized that the installation plan could not be completed in time for the dedication ceremony and agreed to supervise completion of a temporary exhibit. The architectural firm was also eager to submit its drawings of carpet-covered wooden benches and cubes for seating in the upper and lower levels.[61] The architects' working drawings for the exhibition gallery were finally accepted by Ralph Lewis in October 1958.

The excavation aspect of the quarry face exhibit would prove to be an ongoing project. It had actually begun in 1952, and, by 1963, geologists estimated another fifteen years of digging and scraping would be required to complete their work. The permanent monument staff included museum technicians and a Ph.D. museum geologist to carry out the excavation. Although fossils were removed from this area, a primary goal of the excavation was to prepare the north wall of the visitor center for public viewing. This 183- by 35-foot area, which formed a rock wall at a 67 degree angle, required "quarrying away the sterile rock, working the bone out in relief, and cleaning the surface with hand tools, and treatment of the fossil bone with a preservative."[62] Although paleontologists no longer chip away at the rock, their tools remain behind as part of the current exhibit. In 2000, the museum includes original exhibit panels and displays as well as more recent additions, such as a panel in front of the building describing the structure's architectural significance.

A BENTONITE FOUNDATION

The scenery at Dinosaur National Monument is colorful mineral deposits, valleys revealing strata millions of years old, and fantastic shapes carved into solid rock by centuries of erosion. For Mission 66 designers who might have become jaded by this environment, geological power made its presence known in the form of bentonite deposits underneath the visitor center. When exposed to water, bentonite sprang into action, expanding at a force strong enough to move steel girders. Even before the building was completed, the Park Service observed damage to the parking area. Radiating cracks were first observed and reported by Construction Foreman Davis in November 1957.[63] During the first year the building was open to the public, the park staff felt an unsettling vibration in the upper gallery. Lyle Bennett advised performing a vibration test on the balcony slab by placing wooden posts at several points under the overhang. According to Supervisor McCune Ott, who conducted the test, the vibration could only be corrected by installing a post at every beam, a solution unacceptable to the park. Since visitors weren't complaining about the vibration, however, no further action was taken.

In 1962, WODC drew up plans for the reconstruction of the plaza area in an effort to improve the drainage system. These included details of the roof drains and a longitudinal section showing the "typical subsurface drain." At this time, the Park Service installed an aluminum handrail on the ramp and laid down a cobblestone and concrete slab around and under the ramp, which was extended slightly.[64] Despite these improvements, the plaza continued to be a problem. In March 1966, the maintenance division regraded the ground on the north and south sides of the building, realigned the pavement slabs in the east plaza, installed steel pipeline for roof drainage, cut several French drains, and patched other problem areas. The next year, the San Francisco Planning and Service Center grappled with repairs to the visitor center building, which included replacing some of the existing footings with new twenty-foot-deep caissons. In addition, the Park Service extended the lower level lobby, installed new handrails in the gallery, and replaced several of the fixed-sash windows on the east and west wall elevations with operable sashes.[65]

The geological situation was not seriously analyzed until 1966, when Dames and Moore, consultants in applied earth sciences, revealed the presence of bentonite in the soil. Their evaluation indicated that additional damage could be avoided if moisture were kept out of the foundation. After the first intensive season of rain and snow, the bentonite began to move.[66] Eugene T. Mott, who had witnessed similar subterranean action at the Painted Desert Community, compiled a detailed description of the building's damaged areas after inspecting the structure in 1968. Mott's list included two pages of "widening floor tile joints," and cracks in walls and ceilings; the south wall may have settled two inches. Like his predecessors, Mott recommended removal of moisture in the foundation as the park's highest priority. But while others blamed bentonite, Mott thought that the loose, sandy soil around the building was the most likely cause of problems. According to his assessment, the "beautiful" building was "constructed properly"; it displayed solid workmanship and the design was "adequate for construction in a stable area." As far as the moisture problem, Mott had little advice but hoped to avoid a concrete border that would obliterate the landscaping around the building.[67]

Over twenty years later, a 1993 Park Service study reported that Quarry Visitor Center would have a very short lifespan if serious measures were not taken to solve drainage issues. Biannual reports on the water levels in the well holes and west manhole were requested. Even more recently, in 1997, Dinosaur was still "settling and moving," but the cause was determined as both bentonite and a subterranean fault. After structural evaluation, a team of Park Service specialists advised "an overall plan to manage and stabilize" the building, preferably supervised by an architecture and engineering firm or the Denver Service Center.[68]

MISSION 66 CONSTRUCTION CONTINUES

During the early years of Mission 66, several visitor centers were planned for locations throughout the park: a small facility at Pool Creek, "branch" visitor centers at significant points (actually elaborate wayside stations), and a headquarters with offices and general orientation materials. The headquarters/visitor center was controversial, not for its architecture, but because of its disputed location; both Utah and Colorado hoped to claim the new building. Even before the dedication of Quarry Visitor Center, Conrad Wirth directed a public hearing on Dinosaur's continuing Mission 66 program. Six years later, in 1964, a site was chosen in Artesia, Colorado.[69] The building was located off Route 40 at the junction of the road to Echo Park and a scenic viewpoint at Harpers Corner from which visitors could see the Yampa and Green Rivers flowing undisturbed through their ancient canyons. The Artesia Headquarters was as ordinary as Quarry Visitor Center was unusual. Its most defining characteristic, a veneer of rough-cut masonry, closely resembled the facade of a prominent downtown building.[70] Visitors approach a courtyard area equipped with restrooms and a covered patio. Beyond the comfort station is "oasis porch," an additional shaded space with benches, and to the left, the entrance to the visitor center lobby. Small interpretive exhibits share space with the shop and information desk. The auditorium on the right side of the building is still used to show the orientation movie. Park Service offices can be entered from the lobby, but are not part of the visitors' experience. Decked out in a colorful, highly textured masonry pattern, this visitor center could appear to be "harmonizing" with just about any park environment. Although unoriginal in terms of function, the building displays a comforting attention to detail and a permanence appropriate to its setting. The architects, Arthur K. Olsen & Associates of Salt Lake City, had recently designed a visitor center for Capitol Reef in Torrey, Utah.

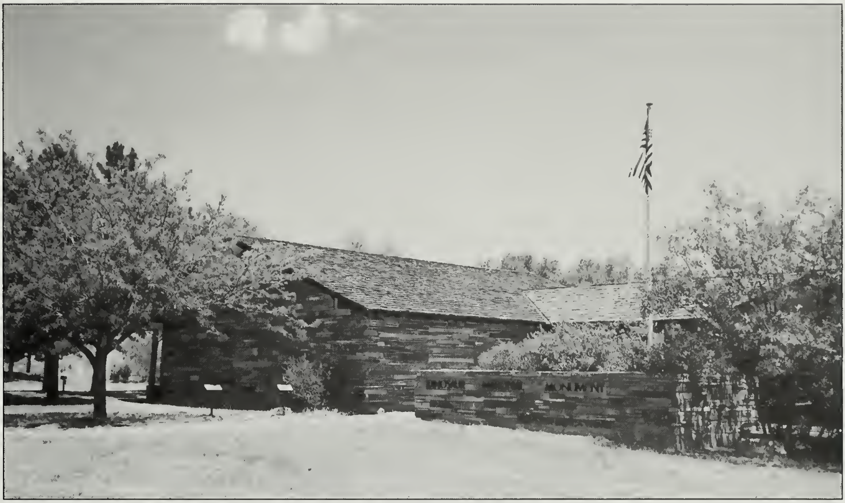


Figure 18. Headquarters, Dinosaur National Monument, Artesia, Colorado, 1998. Photo by author.

By the time Mission 66 planning at Dinosaur was focused on the Artesia Headquarters, Anshen and Allen were busy with a new visitor center in Sequoia National Park. Park planners were eager to develop a headquarters for the Giant Forest district because of its proximity to the Sequoia grove, and envisioned a facility with both visitor and administrative accommodations. As far as architectural style, the planning prospectus noted that the "present trend in design is toward conventional modernism." In their design for a woodland visitor center, Anshen and Allen managed to avoid convention without creating a spectacle. The Lodgepole Visitor Center appeared decades distant from the firm's futuristic work in the desert. With its peaked roof, rough wood paneling, and boulders, the building was a modernist version of a rustic lodge. But where the CCC might have used mortise and tenon construction and peeled log columns, Anshen and Allen chose steel bolts and girders. The roof was raised seam metal, the walls paneled, and the boulders not as bold as those gathered in the 1930s. Inside, the roof features exposed beams, the hallmark of the rustic interior. Even though rustic forms and techniques are imitated, the architects did not attempt to disguise their materials. As a result, they achieved a utilitarian interpretation of rustic suitable for a modern development program.

The firm of Anshen and Allen, overseen in 2000 by principal Derek Parker in San Francisco, has expanded its practice with offices in Los Angeles, Baltimore, Sarasota, and London.[71] The firm specializes in academic, advanced technology, healthcare, and commercial buildings, as well as large-scale planning. Recent international work includes the

Guangzhou World Hospital in China, the New Norfolk and Norwich Hospital in the United Kingdom, and Cornwell House, King's College, London. In 1995 Anshen and Allen completed an addition to Louis Kahn's Salk Institute for Biological Studies in La Jolla, California. This design posthumously links the firm's founders, two University of Pennsylvania graduates, with their alma mater's most famous architect and one of the masters of modern architecture.

Although the Quarry Visitor Center remains essentially as it was during the Mission 66 era, the approach to the site has been significantly altered. Parking became a problem at Dinosaur as early as 1968, and in the early 1970s the entrance to the park was reconfigured to accommodate a shuttle service for use during peak hours. The new design involved obliterating a portion of the original spur road and building a new section with turn-offs to the visitor center parking lot and the residential and maintenance area. Today, visitors park about a mile from the site and walk a short distance to a covered area equipped with a comfort station, benches, and exhibit panels. A shuttle bus then carries them up the winding road and drops them off in front of the visitor center entrance.[72]

Quarry Visitor Center was listed in the National Register of Historic Places as part of a multiple resource nomination in 1986.[73] While other modernist Mission 66 buildings have been ridiculed for their flat roofs, concrete ramps, and cylindrical forms, Quarry Visitor Center receives more praise than criticism. Even as its foundation continues to move, the radical aspects of the building are accepted. One reason for this tolerance is that the modern style seems appropriate in the rocky, almost lunar environment of Dinosaur National Monument. Another reason for the building's success is its fulfillment of a larger purpose. The structure houses remains that are "living" exhibits; the site and its building are one. Modern achievements in the manufacture of tempered glass were a prerequisite of the design. Like many of the best modern buildings, Quarry Visitor Center succeeds not only because of design factors, but through the accidents of location and program. As time has told, modernist buildings are most admired when they fulfill a purpose no other style could satisfy quite as well. Quarry Visitor Center is such a building.

Although the new visitor center was not the first modern facility constructed by the Park Service, it was the most original and the most famous early example of its type. Major architectural journals featured photographs and copies of plans, and their articles included notice of the Mission 66 program. Director Wirth realized he was going out on a limb with Quarry Visitor Center, but felt that the "bold move" would result in a building of "world-renown" and "attract thousands of people."[74] In retrospect, this calculated decision not only helped protect Dinosaur from the threat of a dammed Echo Park, but also launched the development effort that Wirth believed the salvation of the National Park Service.

ENDNOTES

[1] The Wilderness Society, the National Parks Association, the Sierra Club, the National Wildlife Federation, the Izaak Walton League, the American Planning and Civic Association, the Wildlife Management Institute, the Audubon Society, and the National Council of State Garden Clubs were among the approximately thirty conservation groups involved in the Echo Park issue.

[2] Frederick Law Olmsted, "Statement of Frederick Law Olmsted at Hearings Held by the Department of the Interior, April 3, 1950, in the Matter of Dinosaur National Monument, Echo Park, and Split Mt. Dams," library, Dinosaur National Monument; Olmsted's testimony was based on fieldwork relating to the water project. See "Dinosaur National Monument Region, Report of Progress, May 13, 1943."

[3] *Vernal Express* (February 15, 1951); "Dinosaur National Monument, Plan of Development as a National Monument by the National Park Service," n.d., "Dinosaur" clippings files, Western History Collection, Denver Public Library.

[4] Bernard DeVoto, "Shall We Let Them Ruin Our National Parks?" *Saturday Evening Post* (July 22, 1950).

[5] Knopf had recently visited Dinosaur to show support for the endangered area. Wallace Stegner, ed., *This is Dinosaur: Echo Park Country and its Magic Rivers* (New York: Alfred A. Knopf, 1955).

[6] Owen Stratton and Phillip Sirotkin, *The Echo Park Controversy* (Alabama: University of Alabama Press, 1959), 95.

[7] According to the *Vernal Express*, June 3, 1958, the structure came "partly as a result of increased national interest in the monument, growing from the publicity inherent to the Echo Park Controversy..." Historian Elmo Richardson provides evidence that once the Upper Colorado Basin bill passed, the Secretary of the Interior planned immediate Mission 66 improvements at Dinosaur. See Richardson, "Just a Tiny Dinosaur," in *Dams, Parks and Politics* (Lexington, Kentucky: University Press of Kentucky, 1973), 151.

[8] Richard G. Beidleman, "The Dinosaur Museum—From Idea to Reality," in Administrative History Dinosaur National Monument, 1963, unpublished manuscript, library, Denver Service Center (DSC). The quotation was taken from Douglass' correspondence.

[9] Beidleman, "The Dinosaur Museum," 9; "correspondence," Holland to Cammerer, November 8, 1921, National Archives, File 580, Dinosaur National Monument (DINO) archives.

[10] Beidleman, "The Dinosaur Museum," 9; "correspondence," Cammerer to Case, December 30, 1924, National Archives, File 580, DINO archives.

[11] Beidleman, "The Dinosaur Museum."

[12] Beidleman, "The Dinosaur Quarry and Federal Works Projects 1933-1938."

[13] Ned J. Burns, "Comments on Proposed Museum at Dinosaur National Monument," in "Quarry Development 1936-1953," ca. 1936, DINO archives.

[14] "Preliminary Drawing for Museum Building," January 24, 1937, DIN-3-A, microfiche, Technical Information Center (TIC), DSC.

[15] President Franklin D. Roosevelt signed the proclamation enlarging the park boundaries on July 14, 1938.

[16] H. E. Rothrock, "Report on Inspection of Dinosaur National Monument," June 1938, microfiche, TIC, DSC.

[17] Preliminary Sketch, "Museum," February 7, 1944, DIN-3-B, microfiche, TIC, DSC. This drawing includes the following note: "This preliminary sketch is designed to the

approximate dimensional specifications outlined in Associate Park Naturalist M.V. Walker's 'Report on Studies and Investigations at Dinosaur National Monument relative to an interpretive and museum development program,' dated May 2 to June 15, 1943."

[18] The 1949 park brochure, "Dinosaur National Monument Past and Present," informed visitors of the Park Service's "high hopes and plans that this world-famous quarry may be protected from weathering and erosion by erecting a roof over it. Such a structure will make it possible to preserve bones now exposed in the quarry face and also house some dinosaur restorations. But above all it will make it possible to present to the public an active, working quarry where men are engaged in uncovering and preserving in place the fossil remains of these great prehistoric creatures." William Lee Stokes, *Dinosaur National Monument: Past and Present* (Washington, D.C.: Government Printing Office, 1949).

[19] Dinosaur National Monument files, memorandum, "Temporary Quarry Shelter," April 17, 1951.

[20] Regional Director to Superintendent, memorandum, "Report on Conference, May 18, 19, 20, Dinosaur National Monument" [stamped date June 9, 1955], Box 7, Office Files of Director Conrad L. Wirth, 1946-1964, RG 79, National Archives.

[21] "Dinosaur Improvement Fund Reaches $615,899," *Vernal Express* (March 1, 1956).

[22] The eight projects included in the program were "the reliefing of fossils, construction of roads and parking lots for the visitor center, reconstruction of Split Mountain road, installation of utilities, roads and walks for utility buildings, signs and markers," and campground and comfort facilities along the Green and Yampa Rivers. "Dinosaur Monument Construction Draws Big Response at Bid Opening," *Vernal Express* (March 21, 1957), Dinosaur clippings file.

[23] See photo collection, "Quarry," DINO archives.

[24] "Dinosaur National Monument Quarry Development Now Open for Bidding," *Vernal Express*, July 12, 1956.

[25] John Good, "73,000 Visit Dinosaur Monument During Past Year, Says Report," *Vernal Express* (December 20, 1956).

[26] Daily Yellow Correspondence, Superintendent's report, May 9, 1957, DINO archives.

[27] Jess H. Lombard, superintendent, to Mr. Martin Litton, travel editor, *Sunset* (October 3, 1956).

[28] "Master Plan Development Outline," ca. December, 1956, filed in 1954-1957 Daily Yellow Correspondence, DINO archives.

[29] "Visitor Center for Dinosaur National Monument," *Architectural Record* 121 (January 1957): 187.

[30] After graduation, Anshen and Allen were awarded a traveling fellowship abroad and, several years later, arrived in San Francisco nearly penniless. The young architects heard that Ralph Davies, Director of the Standard Oil Company, was eager to have a European residence dismantled and brought back to California. They convinced Davies to abandon the European plan and hire them to design his home in Woodside, California. The Davies commission led to work on Standard Oil stations and ship interiors for an associated business, American President Lines. Telephone interview with Richard Hein by the author, April 1, 1999.

[31] Marguerite Brunswig Staude (1899-1988), a sculptress, originally presented her idea for a 500-foot, block-wide cathedral to Lloyd Wright, Frank Lloyd Wright's son, in the 1930s. Although the design was finally accepted by nuns in Hungary, World War II prevented construction. In 1950, Staude contacted Wright again with plans for a much smaller chapel, but the architect refused to proceed with any but the original design. Kate Rutland Thorne, "Upon This Rock, Marguerite Brunswig Staude and her Sedona Chapel," (West Sedona, Arizona: Chapel of the Holy Cross, 1995).

[32] About this time Anshen and Allen were planning a major housing development in Palo Alto, California. Although originally named the Fairmeadows Tract, the residences came to be known as "Eichler Houses" after their patron, Joseph Eichler.

[33] According to "Upon this Rock," a brochure purchased at the chapel, the building appeared in *Life Magazine, The New York Times* (August 25, 1957) and *The Washington Post.* It received an A.I.A. award for religious structures in 1956 and was pictured in the September 1958 *Architectural Record.*

[34] *Architectural Record*, vol. 120, no. 4 (October 1956), 182.

[35] Richard Hein graduated from the University of Oregon with a bachelor's of architecture in 1953. After working for a private company in San Francisco for eighteen months, Hein joined the firm of Anshen and Allen. He specialized in passenger ship interiors for American President Lines, producing approximately twenty-six designs for marine projects during his career. Hein's early work also included designing the ramp for the Sedona chapel, the Quarry project, and the Food Machinery Corporation building in San Jose. After nine years with the firm, Hein left for eight years and then returned for another fifteen years. He retired in 1987. Telephone interview by the author, April 1, 1999.

[36] Richard Hein, "Design: Anshen & Allen, San Francisco, California," *AIA Journal* (December 1960).

[37] Hein, "Design," 1960.

[38] See Harrison, "Interview with Cecil Doty," 17. Doty repeated his claims in an interview with Jonathan Searle Monroe, who paraphrased the architect's comments in his master's thesis: "A more dramatic change occurred at the Dinosaur Quarry Visitor Center at Dinosaur National Monument. This early Mission 66 building (1958) was well received by the architectural press and gave Anshen & Allen, the designers, good publicity. The design concept, the overall size and functional relationships, the siting, and even some of the construction details were done by Doty. Anshen & Allen made changes to the roofline and altered the shape of an office wing from rectangular to round, both of which significantly changed the final form of the building but not the basic concept. Doty's name was never mentioned in any of the numerous articles describing the building." See Monroe, "Architecture in the National Parks: Cecil Doty and Mission 66," 123-4.

[39] "Recent Work of Anshen and Allen," *Architectural Record* 124 (September 1958): 165-180.

[40] Acting Chief, Division of Design and Construction to Director, memorandum, "Monthly Narrative Report, July 1956," Box 7, Office Files of Director Conrad L. Wirth, National Archives.

[41] According to Stephen Bruneel, senior associate of Anshen and Allen, "the shed is usually part of the sepia background with just the admin/service wing drawn in by hand." Stephen Bruneel to Christopher Jones, February 11, 1999. No dates or title blocks are included on the drawings, but one alternative (later rejected) is signed by Tom Vint.

[42] Bruneel to Jones, February 11, 1999.

[43] Hein, "Design," 1960.

[44] Museum Specialist Robert L. Barrel to Chief, Museum Branch, memorandum, "Method of Displaying Quarry Face, Dinosaur NM," August 5, 1956, "Dinosaur" files, National Park Service History Collection, Harpers Ferry Center.

[45] Although Anshen and Allen stipulated colored concrete for the exterior of the building, the Park Service used local aggregate without added coloring. According to Richard Hein, the color that naturally resulted from the native stone was exactly what the architects had chosen. Richard Hein, Interview by the author, April 1, 1999.

[46] Anshen and Allen, "Finish and Color Schedule," ca. Nov., 1956, archives of Anshen and Allen, San Francisco.

[47] See, for example, "3 Bedroom Residence, Quarry Area," Drawing #3116B, July 27, 1956, TIC, DSC.

[48] "Utility Building, Quarry Site," drawing #3114A, November 21, 1956, and #3114B, April 29, 1957, TIC.

[49] Hanson Construction Company of Altamont submitted the lowest bid of $224,000, but was allowed to withdraw after recognizing the insufficiency of its estimate.

[50] R. Neil Grunigen, Project Supervisor, to Chief, WODC, "Weekly Construction Report," May 13, 1957.

[51] Grunigen to Chief, WODC, "Weekly Construction Report," June 24, 1957.

[52] "Rising Visitor Center Revives Dinosaur Era," *Vernal Express*, September 26, 1957.

[53] Superintendent's monthly report, Jess H. Lombard, December 1957, DINO archives.

[54] John K. Good to Dr. A. S. Coggeshall, December 6, 1957.

[55] "Progress Report of Mission 66 at Dinosaur National Monument," National Park Service, March 7, 1958.

[56] "Dinosaur and Sputnik," *Vernal Express* (November 23, 1957), DINO archives.

[57] Jess H. Lombard to Director, Region Two, "Report on Operation of Visitor Center," October 8, 1958.

[58] "Dinosaurs Meet the People," *Geotimes*, vol. 3, no. 1 (July-August 1958).

[59] George E. Thomas, *The Book of the School: 100 Years* (Philadelphia: The Graduate School of Fine Arts of the University of Pennsylvania, 1990). Even before the construction of Quarry Visitor Center, some critics grouped Anshen and Allen among the significant firms of the future. *Architectural Forum* predicted that the "names of Charles Goodman and Anshen and Allen and Quincy Jones and Fred Emmons and Carl Koch and Keyes, Satterless and Smith may have a place in future history as pioneers only a little less revolutionary than Frank Lloyd Wright." See *Architectural Forum*, ed., *Building U.S.A.* (New York: McGraw-Hill, 1955), 8.

[60] "Exhibit Plan—Dinosaur Nat'l Monument Visitor Center," May 3, 1957, microfiche drawings, TIC.

[61] John W. Jenkins to Director, "Exhibit Plans, Dinosaur National Monument," May 6, 1958, in "Dinosaur Interpretive Plans," vol. 1, DINO archives.

[62] Project Construction Proposal, Theodore E. White and Harold J. Broderick, April 1963, DINO archives.

[63] William H. Clemons, supervisory park ranger, to Chief Ranger, "Structural Damage to Quarry Visitor Center Parking Area," November 27, 1957.

[64] "Reconstruction Visitor Center Plaza," drawing #3149C, August 16, 1962, TIC.

[65] "Repairs to Visitor Center," drawing #3330A (six sheets), September 1967, TIC.

[66] "Report of Investigative Studies, Adverse Settlement, Visitor Center Building, Dinosaur National Monument, for National Park Service," Dames and Moore, July 14, 1966.

[67] Gene Mott to Al Heubner, "Inspection of Headquarters Building at Dinosaur National Monument," May 9, 1968.

[68] A. Sayre Hutchison, historical architect, "Dinosaur National Monument Site Visit, May 19-23, 1997," Rocky Mountain Region archives.

[69] The name of the town has since been changed to Dinosaur, Colorado.

[70] The masonry pattern featured in the visitor center appears on the facade of a commercial building at 92 West Main Street in downtown Vernal. The masonry front was applied to an older brick building.

[71] After the untimely death of Bob Anshen in 1964, Allen expanded the firm with three partners. Allen retired in 1987 and died two years later. See "Bob Anshen Dies at 54," *Architectural Forum* 121 (July 1964): 11; Interview with Richard Hein.

[72] "Development Concept," Dinosaur National Monument, ca. 1972; "Environmental Assessment, Proposed Comprehensive Design Plan," Dinosaur National Monument, Denver Service Center, May 1975.

[73] National Register Nomination Form, "Dinosaur National Monument Multiple Resources," December 1986. This was the first National Register Nomination to include a substantial description of the significance of a Mission 66 building.

[74] "Hearing Before National Park Service on Mission 66 Program for Dinosaur National Monument," Vernal, Utah, May 24, 1958; transcription in DINO archives.

CHAPTER 2

WRIGHT BROTHERS NATIONAL MEMORIAL VISITOR CENTER

KILL DEVIL HILLS, NORTH CAROLINA

Although Mission 66 development was considered crucial for public use of national parks, its modern architectural style did not always coincide with social expectations for wilderness parks, battlefields, or desert locations. Park Service and contract architects attempted to conform to the regional landscape, address local traditions, and temper the modernist aesthetic with appropriate materials. If the national parks and monuments posed countless environmental challenges, however, the site of the first successful powered flight offered an ideal context for a modernist building. The wind-swept dunes of Kill Devil Hills, North Carolina, suggested the clean lines of Mission 66 design, and, like the accomplishment it memorialized, the "new" architectural style represented innovation, achievement, and a future improved by technology. During the early 1950s, the Park Service designed an elaborate million-dollar aviation museum for the Wright Brothers National Memorial. Fortunately, funding could not be obtained for the proposed development, which would have overwhelmed the site with a sprawling modern complex. By 1957, the Park Service was ready to finance construction of a different type of facility. A new visitor center would centralize basic visitor services in a simple, compact plan. In accordance with Park Service practice, the modest visitor center would be built close to the "first flight" site, a location allowing visitors to view both the historic flight path and the memorial from the building's windows and exterior terrace. Small in scale and height, the building would not detract from the park landscape. The Wright Brothers Visitor Center was completed in the early years of Mission 66 and quickly became an example of what the development program could accomplish for a small park with limited resources.

The first organized preservation effort at the Wright Brothers site was launched in 1927 by the newly formed Kill Devil Hills Memorial Association. During its early planning stages, the Association imagined a future museum at the site, but a more immediate concern was the construction of an appropriate memorial atop its namesake sand dune. Congress authorized the Kill Devil Hill Monument National Memorial in March 1927, and the cornerstone for the structure was laid during the next year's anniversary celebration. Rodgers and Poor, a New York architectural firm, designed the 60-foot-high Art Deco granite shaft in 1931-1932.[1] Crowned with a navigational beacon accompanied by its own power house, the tremendous pylon was ornamented by bas-relief wing designs.[2] Kill Devil Hill was not the site of the Wright Brothers' achievement, but the launching point for earlier glider experiments and a location closer to the heavens than the Wrights' primitive airstrip on the flat land north of the dune. When the Wrights set up camp here from 1901-1903, this land was constantly shifting sands. The Quartermaster Corps used sod and other plantings to stabilize the sand hill when the area was still under the jurisdiction of the War Department.[3] In addition, the Kill Devil Hills Association marked the location of the first flight with a commemorative plaque. During the 1930s, plans for the Memorial included a park laid out in the Beaux-Arts tradition, with a formal mall leading to a central garden flanked by symmetrical hangers and parking lots.[4] An airport served as the flat land terminus of the axis, and the Kill Devil Hill memorial as its culmination; six roads radiated out from the monument to the borders of the park. Although this scheme was never implemented, the system of trails and roads constructed by the Park Service in 1933-1936 formed the basis for today's circulation pattern. A brick custodian's residence (1935) and maintenance area (1939) were built south of the hill.

When the monument was planned in the late 1920s, Congressman Lindsay Warren imagined a museum "gathering here the intimate associations," and "implements of conquest."[5] Almost twenty years later, an "appropriate ultra-modern aviation museum" was proposed for Wright Brothers during the effort to obtain the original 1903 plane, but funding was not forthcoming.[6] Such an ambitious construction project began to seem possible in 1951, when the memorial association reorganized as the Kill Devil Hills Memorial Society, and prominent member David Stick established a "Wright Memorial Committee." Stick realized that a museum could only succeed with assistance from the National Park Service, local boosters, and corporate sponsors. Among the committee members recruited for the development campaign were Paul Garber, curator of the National Air Museum in Washington; Ronald Lee, assistant director of the Park Service; and J. Hampton Manning, of the Southeastern Airport Mangers Association in Augusta. In preparation for the first meeting, the Park Service drafted preliminary plans for a museum facility dated February 4, 1952.[7] Regional Director Elbert Cox introduced the project as a "group of buildings of modern form" to be located off the main highway northeast of the monument. The proposed

Wright Brothers Memorial Museum included a "court of honor," "Wright brothers exhibit area," "library and reception center," and funnel-shaped "first flight memorial hall" with outdoor terraces facing the view of the first flight marker to the north and Wright memorial marker to the west. The exhibit galleries were to contain "scale models of the various Wright gliders and airplanes, a topographic map of the area at the time of their experiments, scale models of their bicycle shop and wind tunnel, and photographic and other visual exhibits."[8] One wing of the complex housed offices for the museum curator and superintendent, workshop and storage rooms, and a service court. In elevation, the northwest facade is multiple flat-roofed buildings adjacent the double-height memorial hall, a slightly peak-roofed room with glass and metal walls.

Although it could not provide adequate funding for the museum, the Park Service entered into the planning process in earnest, producing revised plans and specifications in August 1952. Director Wirth looked "forward with enthusiasm to the full realization of the . . . program," and promised that the Park Service would operate and maintain the facility once constructed.[9] He even included cost estimates for the buildings, structures, grounds, exhibits, furnishings, roads, and walks.[10] During the summer, word of a potential commission spread and several regional architects notified Stick of their design services.[11] Despite much effort, however, the committee was unable to raise funds for the million dollar complex, which was originally slated for completion by the fiftieth anniversary. Several smaller goals were achieved in time for the December 1953 celebration: the monument was renamed the Wright Brothers National Memorial, entrance and historical markers established, and reconstructions of the Wrights' living quarters, hanger, and wooden tracks constructed. Though disappointed at the lack of financial backing for the museum, the committee "strongly felt that the original plans for the construction of a Memorial Museum at the scene of the first flight should remain an objective of the Memorial Society."[12] The establishment of the Cape Hatteras National Seashore, also in 1953, may have contributed to their continued optimism.

Four years after the committee's initial attempt to fund an aviation museum, the National Park Service surprised all concerned with an offer to sponsor a scaled-down version of the facility. The committee met in Washington on October 23, 1957, only to learn that funds from the aircraft industry would not be forthcoming. During this meeting, Conrad Wirth outlined his Mission 66 program and revealed that a visitor center at Wright Brothers was included among the proposed construction projects. After further consideration, Wirth promised to make the Wright Brothers facility an immediate objective "by shifting places on the list with one of several battlefield visitor centers planned in advance of the forthcoming Civil War centennial."[13] Just four years earlier, the Park Service had planned a modernist museum for the site on the scale of a Smithsonian, with the free-flowing design of a public building typical of the period. The visitor center of 1957 did not have the aesthetic freedom of a such a museum. For its Mission 66 visitor center, the Park Service sought a smaller, less expensive, more compact structure with distinct components: restrooms (preferably entered from the outside), a lobby, exhibit space, offices, and a room for airplane displays and ranger programs (in place of the standard audio-visual room or auditorium). As designers of the new building, the Park Service chose a new architectural firm based in Philadelphia: Mitchell, Cunningham, Giurgola, Associates, which was soon known as Mitchell/Giurgola, Architects.[14] With its symbolism of innovation, experimentation and evolving genius, the building was an ideal commission for the fledgling firm.

MITCHELL/GIURGOLA, ARCHITECTS

The Wright Brothers Memorial Visitor Center was the "first building to achieve nationwide recognition" designed by Ehrman Mitchell and Romaldo Giurgola.[15] Although only a year old in 1957, the visitor center building type was not unfamiliar to either young architect. Mitchell and Giurgola met in the office of Gilboy, Bellante and Clauss, a Philadelphia firm commissioned to design the 1955-1956 visitor centers at Jamestown and Yorktown.[16] During Gilboy, Bellante and Clauss' association with the Park Service, Mitchell and Giurgola became acquainted with John B. Cabot, chief architect of the Eastern Office of Design and Construction. In October 1957, Mitchell invited "Bill" Cabot to a cocktail party at the family's new home in Lafayette Hill, Pennsylvania. The two discussed the prospect of Park Service work for the untested firm of Mitchell/Giurgola. As Mitchell recalls, Cabot said, "Mitch, don't call me, push me, pressure me . . . if I get work, I'll call you."[17] A few months later, Cabot did call. When Mitchell questioned the Chief Architect about his choice of virtually unknown architects for the prestigious commission, Cabot said that the recent recession in the Eisenhower administration affected his decision: "We got a directive to get every project on the street. We had eight projects and seven architects."[18] If Mitchell/Giurgola obtained the Wright Brothers Visitor Center contract by being in the right place at the right time, the results they achieved far surpassed the Park Service's expectations. The publicity the building would receive in popular architectural journals over the next decade resulted not from the architects' reputation as accomplished modernist architects, but from the design of their building.

Born in Italy in 1920, Romaldo Giurgola was educated at the University of Rome and, beginning in 1950, at Columbia University. He taught at Cornell and served as an editor of *Interiors* magazine before joining the faculty of the University of Pennsylvania in 1958. Ehrman B. Mitchell, Jr., a Pennsylvania native born in 1924, received his architectural education at Penn and a position with a local firm soon after graduation. Three years later he joined Gilboy, Bellante and Clauss of Philadelphia and in 1951 became the supervisor of the firm's London office. His work in England included coordinating with a large English consulting firm in the design of military air fields. When Mitchell returned to Philadelphia by the mid-1950s, he was experienced in running international architectural firms. In 1957, he and Giurgola began planning their partnership, and with the prospect of work from the Park Service, opened their own Philadelphia office. Along with the visitor center commission, the firm designed two other public buildings, several residences, and projects for competitions during its first few years in business.[19] When Giurgola became chairman of Columbia's architectural department in 1966, the firm opened a second office in New York. By this time Mitchell/Giurgola was a well-known architectural presence with an award-winning parking garage and the much sought after commission for the A.I.A. headquarters building in Washington, D.C., to its credit.[20] Ten years later, the partners would receive the A.I.A. firm award, the organization's most distinguished award for an office. The bicentennial year also marked the dedication of Mitchell/Giurgola's second Park Service structure, the Liberty Bell Pavilion on the mall across from Independence Hall.[21] Among the firm's many significant achievements are the headquarters building of the United Fund in Philadelphia (1971), of which one architectural historian declared "one has but to travel up and down the east coast of the United States to see the influence it has had on urban architecture."[22] Mitchell served as president of the A.I.A. in 1979-1980, and in 1982, Giurgola was awarded the A.I.A. Gold Medal, the highest honor bestowed upon individual architects. The Wright Brothers Visitor Center was not only featured in the A.I.A. nomination, but as part of a traveling "Gold Medal Exhibition" sent to schools across the nation.[23] Architectural historians assessing the firm's career look to this building as the beginning, and, as their first significant work, a benchmark from which to judge future growth and change.[24]

The Wright Brothers Visitor Center commission not only inspired Mitchell and Giurgola, but, more importantly, proved a challenging design problem worthy of national recognition. Like a handful of other park sites, the Wright Brothers Memorial is a monument to scientific and technological achievement. For the architects, as for the public, its value lay both in its significance to the history of aviation and to the more personal story of perseverance and experimentation leading to scientific progress. During the 1950s, when many of the country's first modern airports were under construction and the dream of space travel became a reality, aviation facilities used modern technology and materials to create aesthetic representations of flight, suggesting the limitless future of transportation. One early example, the terminal building at Lambert-St. Louis Airport designed by Minoru Yamasaki with George Hellmuth and Joseph Leinweber (1953-1956), housed terminals in three concrete groin-vaulted buildings with glass and aluminum forming the semi-circular walls of the remaining space. By the beginning of the Mission 66 program, Eero Saarinen, creator of the Jefferson National Expansion Memorial, was busy with plans for the TWA Terminal at Kennedy International Airport, New York (1956-1962), and Dulles International Airport, Reston, Virginia (1958-1962). In November 1957, park employees sent bags of sand from Kill Devil Hills to Los Angeles for the dedication of the city's "Jet-Age Expanded International Airport."[25]

Along with social change, the early 1960s brought restlessness among elite designers and a readiness for new leaders in the profession. In 1961, architectural critic Jan Rowan used the term Philadelphia School to describe what he hoped would become an exciting new direction in the practice of architecture. Architectural historians of today are equally eager to group Mitchell/Giurgola in this innovative "school" and to compare their work with the designs of Saarinen and others. As Ehrman Mitchell recalls, he and his partner were not thinking about modernist philosophy during their work at Wright Brothers, nor were they particularly interested in striking out in a new direction. The architects approached the Wright Brothers commission as a "natural response to conditions of program" and were motivated by "the quest for modern design." The overwhelming challenge was to portray the idea of flight in a static form. Mitchell/Giurgola's unconsciousness of any deliberate attempt to remake modernism was an early indication of their originality and key to their successful practice.

In theoretical discussions following construction of the visitor center, Mitchell and Giurgola explained how the firm was both modernist and critical of the standard tenants of previous modern design. As important as their built work, the theory and projects of Mitchell/Giurgola not only influenced generations of student architects, but inspired the flagging profession with new hope. Mitchell and Giurgola considered themselves "'inclusivist'" in their architectural theory and were convinced that a "'partial vision'" in design presented a more acceptable view of reality than the elitist and exclusionary practices of past modern architecture.[26] The young architects began their career at a time when severe modernist architecture seemed to lack the vim and vigor of real life. The work of Philadelphia architect Louis I. Kahn offered exactly what was missing: a sense of order and a reason for being. Kahn passed on his architectural theories in lectures at the University of Pennsylvania and in his buildings; construction began on the University's Richards Laboratories in 1958, the year Giurgola joined the faculty. Energized by Kahn's work and their shared experience at Penn—Mitchell, Giurgola, Robert Venturi, Robert Geddes, and other young architects emerged as a new force in the profession. By the mid-1960s this "Philadelphia School" was considered on the cutting edge of architectural design. As Rowan described it, the Philadelphia School responded to the modernist work of such icons as Richard Neutra and Mies van der Rohe. In place of the abstract forms and universal principles of the previous generation, the younger architects gravitated toward Kahn's more personal and sensitive design philosophy. The close relationship between Mitchell/Giurgola and Kahn is illustrated by the writings of Romaldo Giurgola, who not only became an ardent follower, but a scholar of Kahn's work. Closer study of Giurgola's writings helps to show how Kahn influenced the firm's attitudes toward place, community, and landscape and their expression through the use of light and attention to building materials.[27]

Although their first major building, Mitchell/Giurgola considered the Wright Brothers Visitor Center an important example of their architectural philosophy; the design is clearly a response to the methods of their predecessors and to the new possibilities outlined by Kahn. In a 1961 reference to the design methodology employed at Wright Brothers, Giurgola explained that the "order will be the participation in the environment of the building's special theme, not the imposition of abstract forms."[28] The same year, when interviewed for *Progressive Architecture*, Giurgola spoke about the role "subjective experience" played in the design process, a subject considered taboo to the blatantly objective proponents of the International Style.[29] The article included a full-page detail photograph of a segment of the visitor center illustrating the contrast of wood panels and concrete, close-ups of the entrance and ceremonial terraces, and smaller views of the overall building and plan. With the exception of Quarry Visitor Center at Dinosaur, completed in 1958, the Wright Brothers Visitor Center received the most media coverage of any National Park Service project of its type.

The Philadelphia office of Mitchell/Giurgola, Architects became MGA Partners in 1990. The principals of this successor firm—Alan Greenberger, Daniel Kelley, and Robert Shuman—worked with the founders beginning in the 1970s. MGA Partner's current projects include the Gateway Visitor Center on Independence Mall, a new facility slated for completion in 1999, the Children's Discovery Museum of the Desert in Rancho Mirage, California, and a theater and drama center for Indiana University in Bloomington. The firm also inherited records and drawings from past projects, most of which have been transferred to the Architectural Archives at the University of Pennsylvania. The New York office retains the original name "Mitchell/Giurgola." In 2000, Ehrman Mitchell is retired and living in Philadelphia. Romaldo Giurgola lives in

Australia, where he is a partner of Mitchell/Giurgola & Thorp Architects of Canberra and Sydney.

DESIGNING THE VISITOR CENTER

During his speech at the 1957 First Flight Anniversary ceremony, Conrad Wirth described "major developments" scheduled for Wright Brothers Memorial over the next two years. The Park Service planned to proceed immediately with construction of a new entrance road and parking lot for the visitor center. Actual construction of the visitor center would begin during the next fiscal year. The new building would "accommodate visitors in large numbers . . . provide for their physical comforts . . . and present the story of the Wright Brothers at Kill Devil Hill in the most effective way graphic arts and modern museum practice can do it."[30] Wirth's remarks seem innocent enough, but the new building transformed the visitor experience at Wright Brothers. As historian Andrew Hewes pointed out in 1967, the focus of site interpretation shifted from the memorial shaft to the visitor center. The interior of the shaft and a stairway to the top of the monument had been open to visitors since its creation, but in 1960 access was closed. During an August 1958 committee meeting, members agreed that "special consideration be given to directing people to the first flight area rather than to the memorial feature."[31]

Excitement over what shape the visitor center might take increased after the groundbreaking at the anniversary ceremony. According to Superintendent Dough's monthly report, "Mr. Benson of EODC and Messrs. Mitchell, Cunningham and Giurgola" visited the site on March 15 "in order to work up final drawing plans for the visitor center." These were actually preliminary design studies, the first of over one hundred sketches and drawings created for the visitor center. The next month, "Messrs. Tom Moran, Harvey H. Cornell (landscape architect), Donald F. Benson and others" gathered to discuss the location of the visitor center and parking area. The Superintendent included an uncharacteristically lengthy comment on the results of these meetings:

> The final plan reflects contributions from the Washington, Region One, EODC and Memorial offices as well as contributions of members of the architectural firm preparing the plans. It always impresses us to witness the Service planning a development as a team; wherein, after an exchange of ideas, the end product is better than any one individual or office could plan.[32]

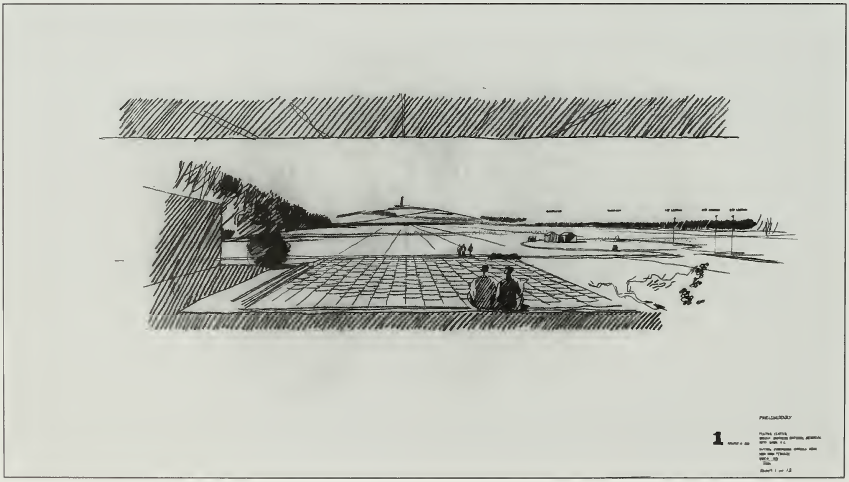
This collaborative effort took shape in the Park Service's development drawings of Route 158 (still under construction), the entrance road to the monument, the parking lot, visitor center footprint, and paths to the quarters and hanger.[33] The location of these features and the connections between them were approved by John Cabot, Regional Director Elbert Cox, Thomas Vint, and Conrad Wirth between April and June 1958. As the Mission 66 report for the park emphasized, the visitor center was to be "within the Memorial near the camp buildings" and a trail would lead from the facility to the first flight area.[34] Mitchell corroborated that the siting of the building was entirely a Park Service decision. The site was "exactly what they dictated. The location was specified as being close to the flight line." In a recent letter, Giurgola agreed that the site "was carefully planned while working closely with the NPS."[35] The Park Service wanted the public to stand under the dome and be able to see the monument and first flight markers from inside the building.[36]

Mitchell/Giurgola's early sketches on yellow trace, produced in March and April 1958, included several very different ideas for the overall plan of the building and its exhibition space. In one case, the architects envisioned an office wing separated from the rest of the building by a landscaped courtyard; the gallery was two stories. They also considered placing the central lobby and information area between an office wing and exhibit gallery. A version of the compact organization that would become their final choice was considered in March but not accepted until later in the design process. The architects' proposals for the double-height gallery and fenestration demonstrated their interest in creating dramatic effects of light and shadow, not to mention maximizing the opportunity to frame specific exterior views. Fenestration possibilities ranged from triangular mullion designs to vertical and horizontal patterns on the upper half of the exhibit space. These window arrangements were coordinated with first-floor windows, usually of a contrasting design. One perspective shows this gallery as a glass-walled cylinder; another slices a parachute-shaped roof open in the center and inserts a half-moon of glass. In some of the sketches the architects used brilliant colors—bright white, yellow and turquoise—to emphasize the contrast between translucent and solid sections of the window walls. Subtle changes in the patterning of window facades and ceilings altered the effect of mass, causing the gallery to "float." Throughout their artistic experiments, Mitchell and Giurgola were considering the location of the building in relation to the hilltop monument and the flight area. Preliminary site sketches include arrows indicating vistas from the building to these points of interest. The firm's early design efforts demonstrate a wide range of possibilities, but none that compare with the final plan in terms of clarity of program, circulation, and function.[37]

While the architects worked with possible design schemes, the park turned its attention to construction of the parking facilities accompanying the new building. In June the contract for the new entrance road and parking area was awarded to Dickerson, Inc., of Monroe, North Carolina, for the low bid of $73,930. The 0.56 mile road and parking area was to be completed within two hundred and fifty days. A group of EODC architects and landscape architects—Zimmer, Moran, Roberts, and McGinnis—visited in August "to discuss plans for the Visitor Center and Parking Area."[38] As Dough remarked, "the completion of the road project will pave the way for the building contractor."[39] The planning for the visitor center project also provided the incentive to finalize a land acquisition deal for which state funds had already been allotted. Congress authorized the Memorial's boundary expansion in June 1959, adding an additional one hundred and eleven acres to the park.[40] This extension provided the additional land to the east and north of the building necessary to include the fourth landing marker and parking lot.

The preliminary plans submitted by Mitchell/Giurgola at the end of the summer were visually pleasing as well as instantly readable. The initial sketch in the series only depicts the building's ceremonial terrace, the roof overhang, and the edge of the lobby framing a panoramic view of the monument, barracks, and take off and flight markers. The final plan organized the elements of the program within a square, avoiding the potential monotony of such geometry by alternating interior spaces with open exterior terraces. The architects' early sketches suggest that their artistic exuberance might have been a little shocking to their Park Service clients. Perhaps in an effort to temper the more unusual aspects of the design, Mitchell/Giurgola produced several more subtle sketches. In elevation, the shell roof appears to diminish; from some angles it

Figure 19. Wright Brothers Visitor Center. This view of the memorial and flight markers from the ceremonial terrace was a preliminary drawing completed in August 1958. Courtesy of National Park Service Technical Information Center, Denver Service Center.



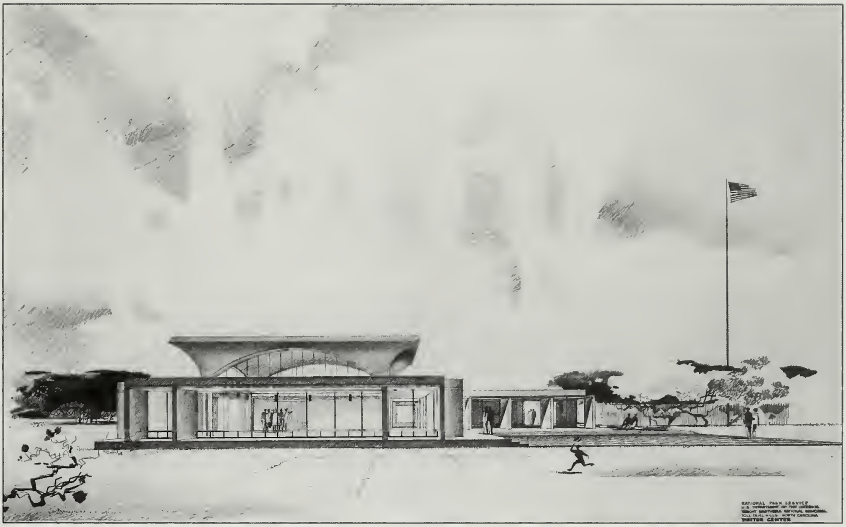
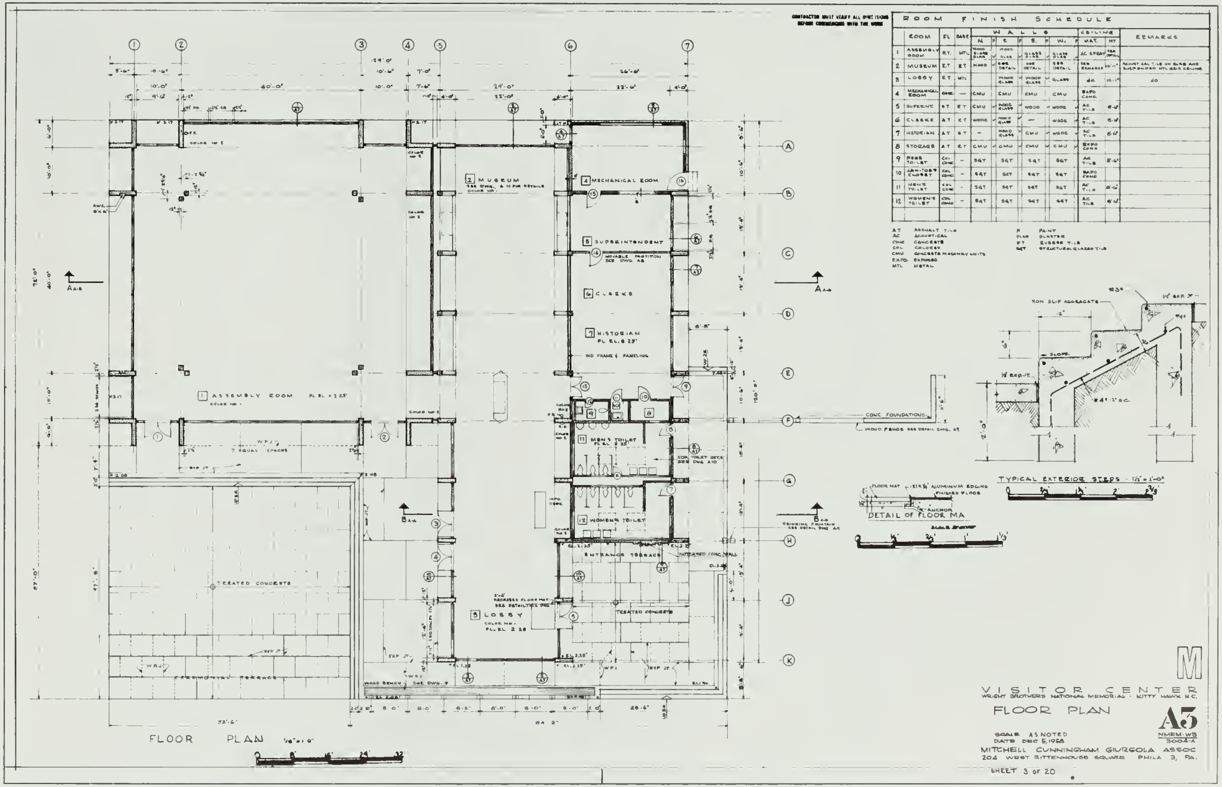

NATIONAL PARK SERVICE
U.S. DEPARTMENT OF THE INTERIOR
WRIGHT BROTHERS NATIONAL MEMORIAL
KILL DEVIL HILLS NORTH CAROLINA
VISITOR CENTER

Figure 20. Wright Brothers Visitor Center, presentation drawing, 1959. Courtesy of National Park Service Technical Information Center, Denver Service Center.

appears to dominate the structure, but as the building is approached, the dome gradually levels out and almost disappears. Among the preliminaries is a view of the building and the distant Wright Brothers monument against the night sky. Two-thirds of the paper is black and the building barely distinguishable among the trees and gentle rise of the horizon. Attention is focused on the road leading into the park, an exiting car, and a car passing by on the main highway.[41]

The Park Service invited Stick and his committee to a meeting for review of the preliminary plans of the building and exhibits on July 28, 1958. In August members of the committee awaited copies of the revised building plans. A misunderstanding prevented Mitchell/Giurgola from beginning the working drawings, and when Cabot asked about their progress in late September, they were stunned. Despite this slow start, the architects rushed to complete the required drawings by the December 7 deadline. The working drawings essentially refined the designs presented earlier, but the cover sheet depicts an unusual perspective of the floor plan. The axonometric aerial view emphasizes the extent of window space, shown as thin, solid lines, in contrast to the three-dimensional walls. A plan and elevation appeared in a February 1959 "news report" in the popular journal *Progressive Architecture*. The short description, "Two Visitors' Centers Exemplify New Park Architecture," noted that "the design of visitors' facilities provided for national tourist attractions seems to be decidedly on the upgrade, at least as far as the work for the National Park Service is concerned."


CONTRACTOR MUST VERIFY ALL DIMENSIONS BEFORE COMMENCING WITH THE WORK
1 ASSEMBLY ROOM FL EL + 2.25
2 MUSEUM SEE DWG. A 10 FOR DETAILS
3 LOBBY FL EL 2.28
4 MECHANICAL ROOM
5 SUPERINTENDENT
6 CLERKS
7 HISTORIAN FL EL 8.25
11 MEN'S TOILET
12 WOMEN'S TOILET
ENTRANCE TERRACE
TERRACED CONCRETE
CEREMONIAL TERRACE
WOOD BENCH SEE DWG. 9
MOVABLE PARTITION SEE DWG A8
WD FRAME & PANELING
PATTERNED CONC. WALL
CONC FOUNDATIONS
WOOD FENCE SEE DETAIL DWG. 49
DRINKING FOUNTAIN SEE DETAIL DWG A9
72'-0"
40'-0"
57'-0"
47'-8"
53'-6"
84'-2"
120'-8"
FLOOR PLAN 1/8"=1'-0"
TYPICAL EXTERIOR STEPS - 1½"=1'-0"
NON SLIP AGGREGATE
SLOPE
½" EXP. JT.
#4 @ 12" O.C.
DETAIL OF FLOOR MAT
FLOOR MAT
1½"×1⅛" ALUMINUM EDGING
FINISHED FLOOR
ANCHOR

	ROOM	FL	BASE	WALLS N.	P	E.	P	S.	P	W.	P	CEILING MAT.	HT	REMARKS
1	ASSEMBLY ROOM	RT.	MTL.	WOOD GLASS PLAS	✓	WOOD GLAS	✓	GLASS PLAS	✓	GLASS PLAS	✓	AC SPRAY	SEE DETAIL	
2	MUSEUM	RT	RT	WOOD	✓	SEE DETAIL		SEE DETAIL		SEE DETAIL		SEE REMARKS	10'-1"	ACOUST CAL TILE ON SLAB AND SUSPENDED MTL GRID CEILING
3	LOBBY	RT	MTL			WOOD GLASS	✓	WOOD GLASS	✓	GLASS		do	16'-1"	do
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6	CLERKS	AT	RT	WOOD	✓	WOOD GLASS	✓	—		WOOD	✓	AC TILE	8'-6"	
7	HISTORIAN	AT	RT	—		WOOD GLASS	✓	CMU	✓	WOOD	✓	AC TILE	8'-6"	
8	STORAGE	AT	RT	CMU	✓	CMU	✓	CMU	✓	CMU	✓	EXPO CONC		
9	PRIV TOILET	COL CONC	—	SGT		SGT		SGT		SGT		AC TILE	8'-6"	
10	JANITOR'S CLOSET	COL CONC	—	SGT		SGT		SGT		SGT		EXPO CONC		
11	MEN'S TOILET	COL CONC	—	SGT		SGT		SGT		SGT		AC TILE	8'-6"	
12	WOMEN'S TOILET	COL CONC	—	SGT		SGT		SGT		SGT		AC TILE	8'-6"	

AT	ASPHALT TILE	P	PAINT
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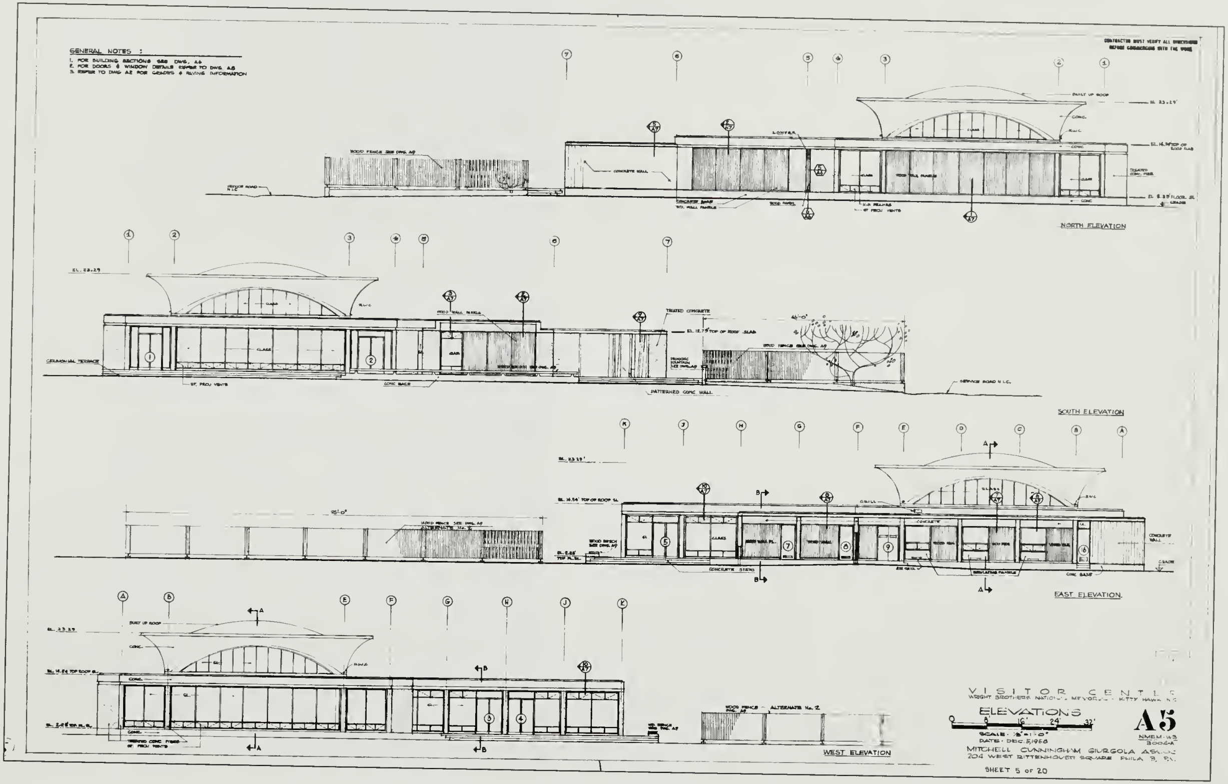
CONC	CONCRETE	RT	RUBBER TILE
COL	COLORED	SGT	STRUCTURAL GLAZED TILE
CMU	CONCRETE MASONRY UNITS		
EXPO.	EXPOSED		
MTL	METAL		

VISITOR CENTER
WRIGHT BROTHERS NATIONAL MEMORIAL · KITTY HAWK N.C.
FLOOR PLAN

SCALE AS NOTED
DATE DEC 5, 1958
MITCHELL CUNNINGHAM GIURGOLA ASSOC
204 WEST RITTENHOUSE SQUARE PHILA 3, PA.
SHEET 3 OF 20

M
A3
NMEM-WB
3004-A

Figures 21 and 22. Wright Brothers Visitor Center. The plans, sections and elevations of the building were completed in December 1958.


GENERAL NOTES :
1. FOR BUILDING SECTIONS SEE DWG. A6
2. FOR DOORS & WINDOW DETAILS REFER TO DWG A8
3. REFER TO DWG A2 FOR GRADES & PAVING INFORMATION
CONTRACTOR MUST VERIFY ALL DIMENSIONS BEFORE COMMENCING WITH THE WORK
NORTH ELEVATION
SOUTH ELEVATION
EAST ELEVATION
WEST ELEVATION
WOOD FENCE SEE DWG. A9
CONCRETE WALL
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BUILT UP ROOF
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GLASS
CEREMONIAL TERRACE
TREATED CONCRETE
EL. 12.75' TOP OF ROOF SLAB
PATTERNED CONC. WALL
SERVICE ROAD N.I.C.
WOOD FENCE SEE DWG. A9 ALTERNATE No. 2
CONCRETE STEPS
EL. 14.54' TOP OF ROOF SL.
WOOD FENCE - ALTERNATE No. 2
VISITOR CENTER
WRIGHT BROTHERS NATIONAL MEMORIAL - KITTY HAWK N.C.
ELEVATIONS
0 8' 16' 24' 32'
SCALE - ⅛" = 1'-0"
DATE - DEC. 5, 1958
A5
NMEM-WB 3004-A
MITCHELL CUNNINGHAM GIURGOLA ASSOC
204 WEST RITTENHOUSE SQUARE PHILA 3, PA.
SHEET 5 OF 20

Perhaps not coincidentally, the other visitor center pictured was the work of Bellante & Clauss at Mammoth Cave National Park.[42] Later that year, the architects submitted a presentation drawing, complete with a small boy flying a toy plane in front of the ceremonial terrace, and a twelve-inch sectional model of half of the exhibit hall (see figure 20 on page 77). The model effectively demonstrated the building's innovative air circulation system with a cut-away view of the duct in the assembly room. In section, the concrete dome appeared lighter and more "wing-like" than depicted by drawings.

As December 7 approached, the committee began planning for its annual celebration, combined this year with the observance of the 50th anniversary of the United States Air Force. The committee hoped that a ground breaking or cornerstone laying ceremony might be included in the festivities. A month earlier, Lee reported that the final drawing for the visitor center was not complete and, therefore, the accurate laying of a cornerstone impossible.[43] The Park Service chose to initiate the Mission 66 program at Wright Brothers with a speech by Conrad Wirth outlining improvements scheduled for the Memorial over the next two years. Wirth had the honor of digging the first shovel of earth at the site of the future visitor center with a silver spade.[44]

In a one-sheet resume promoting Mitchell/Giurgola, written a few years after the visitor center dedication, the architects described the Wright Brothers commission as "among our major projects" and went on to discuss its design in some detail. The "dome-like structure over the assembly area," though technically "a transitional thin shell concrete roof with opposed thin shell overhangs connecting the perimeter of the structure to form a complete monolithic unit," also had a symbolic role. The roof structure design "admirably serves to allow light into the display area of the aircraft to give this area a significant character as well as forming a strong focal point on the exterior of the structure which stands above the low-lying landscape, in concert with the higher rising dunes and pylon." Evidently, the north concrete wall of the entrance terrace had been the subject of considerable public speculation. Here, and in their resume, the architects explained that the patterned wall was intended "to be an expression of the plastic quality of concrete by means of well-defined profiles, recessions and protrusions, simply placed to form an integral pattern over the wall surface." Not only did the wall feature rigid and curved shapes, but also contrast in depth and surface, as sections of the wall were bush hammered. In effect, the concrete patterned wall was public art.[45]

The attention lavished on aesthetics and symbolic purpose, as described by Mitchell/Giurgola, did not detract from the visitor center's practical function. Visitors appreciated the straightforward approach to the building from the parking lot and the exterior restrooms adjacent the

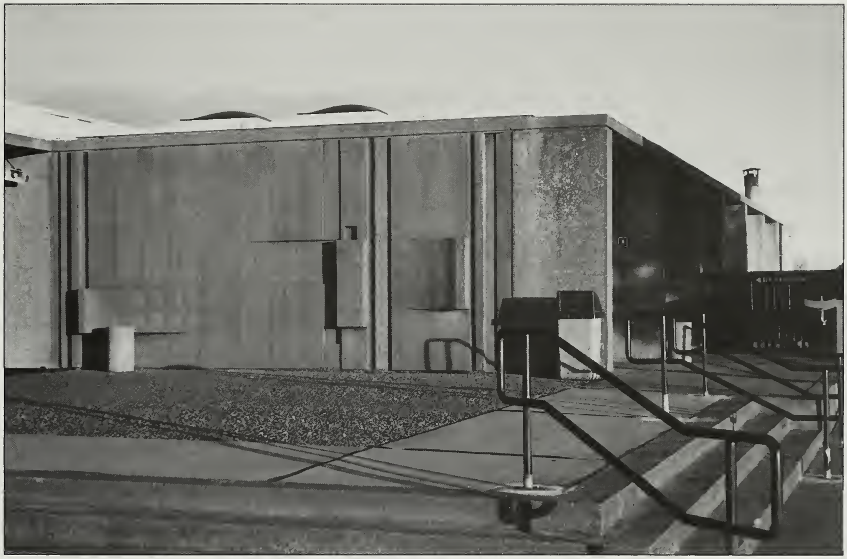


Figure 23. Wright Brothers Visitor Center, view of "patterned wall" from entrance, 1999. Photo by author.

entrance terrace. They may not have noticed the unusual shape of the drinking fountains, with their molded concrete basins, or paid much attention to the undulations and protrusions of the sculpted wall. But even at the most basic level, these design elements suggested the free-flowing form of both sand dunes and objects that fly. The entrance terrace was also part of the 128-foot-square concrete platform elevating the entire building a few feet above the ground. Steps extended to either edge of the terrace, and visitors crossed the open area to reach the double glass doors leading into the lobby. At this point, visitors were also invited to walk around the building to the ceremonial terrace. The entrance facade was full-height steel-framed windows divided by concrete piers, a pattern of bays encircling the building. Similar windows formed the far wall of the lobby, which could be seen by looking through the building from the terrace.

Upon entering the visitor center, attention was immediately directed towards the ceremonial terrace outside and the first flight monuments beyond. The Park Service information desk was actually located behind the visitor at this point. Since the lobby space flowed into the exhibit room, visitors gravitated to this area after taking in the view. The walls of the exhibit area were entirely covered with vertical tongue-and-groove cypress boards and wood paneling. This interior treatment, combined with the lack of windows, resulted in an inward-looking museum space conducive to study.[46] Park offices were located to the left of the exhibit area. Once visitors had followed the exhibits in a rectangular pattern around the museum, they found themselves at the entrance to the assembly room. In contrast to the muted tones and contemplative mood of the museum, the assembly room was a double-height space full of light from the three clerestory windows in its shell roof and the floor-to-ceiling windows on three sides. The shell roof, the 40-foot-square shape of the space, and the square mirrored above in the corrugated concrete overhang also emphasize the importance of the replica 1903 flyer in the center of the room. This assembly area was intended to substitute for an audio-visual or auditorium space, and in their presentations, Park Service interpreters would not only use the plane as a prop, but point out the flight markers, hangar and living quarters, and distant hilltop monument. Double doors at either end of the south facade led out to the ceremonial terrace. When groups gathered here for the annual celebration and other events, the Memorial's significant features stood in the background.

Although the interior contrasts in ceiling height and the amount of light emitted into the spaces belies the fact, the visitor center's walls are divided into equally spaced bays; whereas the assembly room is all glass, however, the office and exhibit spaces alternate cypress wood panels with sections of treated concrete. The faces of the piers are bush hammered. These surface contrasts force the visitor to pay attention to the composition of materials: the durable cypress wood, traditionally used in boat building, and the color and texture of the aggregate, which includes sparkling chunks of quartz and other arresting stones. In theory and practice, the Wright Brothers Visitor Center was a balance between aesthetics and function.

The best example of Mitchell/Giurgola's concern with aesthetically pleasing structure is also the least noticeable. The mechanical systems for heating and cooling the building were "inconspicuously incorporated" into the building. *Progressive Architecture* was particularly interested in the "water-to-water heat pump" that both took advantage of the oceanfront location and eliminated the need to compromise the building's "vast horizontality with a vertical stack."[47] Fan-coil units and ducts were hidden above a suspended ceiling in the lobby and museum, but in the assembly room, they became part of the interior decoration. The corrugated concrete overhang houses ducts that pull in fresh air from outside, and the "soffit" below is a "continuous slot" for return air. Frederick W. Schwarz of Morton, Pennsylvania, was the consulting engineer for the heating and air conditioning system.

BUILDING THE VISITOR CENTER

Donald Benson remembers the prospect of a modernist visitor center on the Outer Banks of North Carolina as more controversial than the colorful beach shelter he designed for Cape Hatteras National Seashore a few years earlier. The shelter's sun shades rose out of the beach like sculptures, but such artistic license was acceptable in a recreational facility devoted to seaside entertainment. In contrast, the visitor center was expected to be functional, dignified, and a public building for the local community. If the Park Service was now familiar with the Mitchell/ Giurgola design, local contractors must have been surprised when sets of plans and specifications were sent out for bidding in January 1959.[48] Modern architecture was not part of the design vocabulary of the region, nor were modernist buildings prevalent in the state of North Carolina.[49] Bids were opened on February 4, 1959, and the contract was awarded to Hunt Contracting Company of Norfolk, Virginia, for their offer of $257,203.[50]

Construction of the visitor center began in March 1959, and foundation piles had been driven by the end of the month. In early spring, the beam forms were at grade level. Superintendent Dough predicted rapid progress now that "the slow process of getting the building staked out, supplies on hand and work organized has been completed."[51] Concrete columns and piers were erected in June and most of the floor slabs poured. On July 24, the contractors' work was inspected by Tom Vint, chief of design and construction, and Chief Safety Officer Baker, both of the Washington office.[52] By the end of the summer, the east elevation had begun to take shape. A view from the south shows the beams for the exhibit room standing apart from the office wing. The next month, contractors were laying the ribbed ceiling forms for the corrugated concrete overhang around the perimeter of the assembly room.[53] The major concrete portions had been cast, and Mitchell and Giurgola may have witnessed some of this form work during their "field inspection" at the site on September 24-25.[54] Form work for the patterned wall was well underway by October. A steel grid was used to create the protruding shapes on the surface of the wall. While the decorative wall was under construction, contractors were also assembling the arch beam forms of the dome. The general shape became visible in November; a plywood shell framed the central half sphere, and intricate interior scaffolding supported the dome framework throughout this construction. Engineer Don Nutt of EODC witnessed the "dome pour" later in the month. Smooth reinforced concrete covered the central portion first. The contractors then turned to form work for the "flange overhangs," which were subsequently poured. The dome sat on four coupled columns and was "tied" at its base by four tension rods. A December photograph of the assembly room interior shows the completed dome and semi-circular windows, the supportive scaffolding removed.

Despite colder temperatures, contractors were able to pour the steps of the visitor center in January 1960. Chief of EODC Zimmer and Supervising Architect Cabot spent two days "reviewing progress and details" of the construction that month, and Don Benson and Ann Massey, both of EODC, visited the site to discuss color and design.[55] Interior framing was still exposed in February, but the dome, overhang, and exhibition area roof were considered complete. Roofing compound was applied to the lobby section of the visitor center the next month, although glass sections of the building remained empty. Wall panels and windows were not installed until April, when engineer Don Nutt and landscape architect Ed Peetz (EODC) visited for a construction review. Sometime during the month, the contractor made his third estimate for a completion date, settling on June 10. The final inspection of the visitor center took place on June 20, 1960. Evidently no major changes were required, and specialists from the museum division were busy installing the twenty-two museum exhibits during the first weeks of July, when work also began on the surrounding landscaping.[56]

The contractors for "planting and miscellaneous construction"—Cotton Brothers, Inc., of Churchland, Virginia—had replaced existing concrete walks and additional pathways by mid-August. Landscape work involved grading and spreading topsoil as well as "considerable experimentation and effort . . . with native groundcovers." After completing the walks, seeding, planting tubs and flagpole base, the contractors began work on

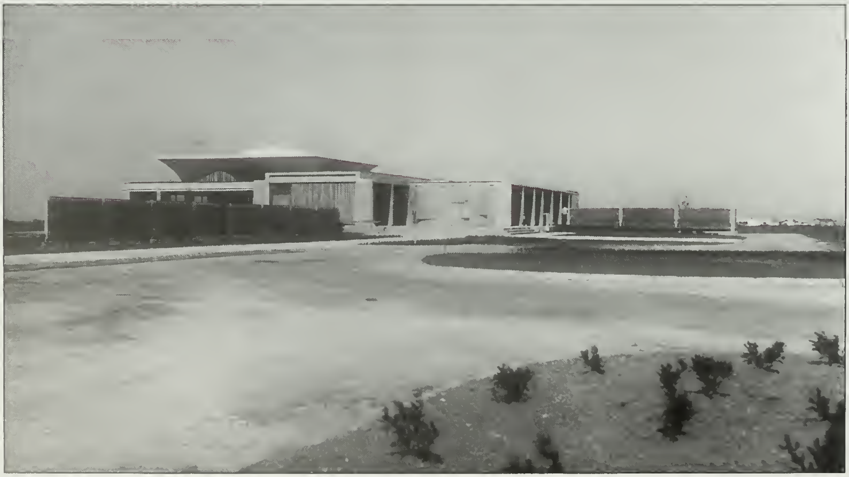


Figure 24. Wright Brothers Visitor Center, exterior view looking north, ca. 1960. Courtesy National Park Service Technical Information Center, Denver Service Center.

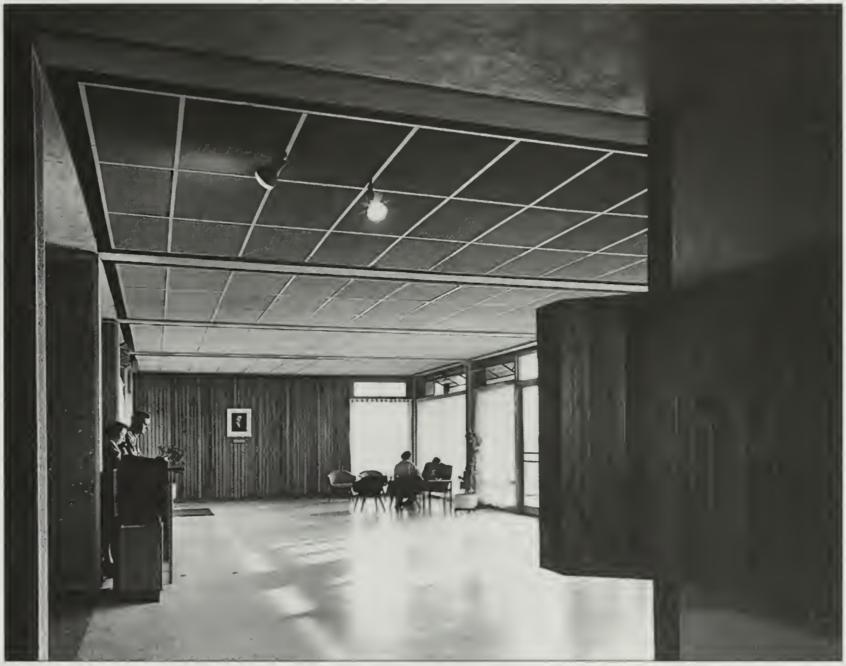


Figure 25. Wright Brothers Visitor Center lobby, ca. 1959. Courtesy MGA Partners, Architects, Philadelphia.

the wooden fence. Progress was interrupted by Hurricane Donna, which struck September 11 and leveled sections of the fence, but repairs were accomplished by the end of the month. In addition, the contractors planted twelve varieties of trees and provided plants for inside the museum. Before the final inspection, Cotton Brothers installed the Park Service's signs and gate.[57]

The Wright Brothers Memorial Visitor Center was officially opened to the public on July 15, 1960. By all accounts, the building met with a positive reception. Superintendent Dough wrote that "hundreds of compliments have been received about the exhibits and the building's design since it was opened. Visitors are generally surprised to learn of the aeronautical principles formulated by the Wrights, and the descriptive term 'beautiful' is used repeatedly in describing the building." He also noted that although about two thousand visitors passed through the visitor center every day during the summer season, "these are so well distributed during visiting hours that there are seldom over 75 visitors within the building at a time . . ."[58] During the month of August, the site received 62,177 visitors, a 34 percent increase since the year before, and approximately three thousand more visitors than visited in August 1998.[59] Although Dough seemed optimistic about these figures in his initial report, by September he had become concerned about the "too interesting" museum exhibits, which he blamed for causing congestion in the visitor center. On five peak days "... 3,500 plus jammed into the visitor center." Dough indicated that the Park Service had not expected such crowds until 1966, as shown by graphs included in their Mission 66 prospectus. Rather than consider a building expansion, however, Dough suggested changing the exhibition layout: "More museum exhibits to further spread out the visitors may be the answer, but in our view the law of diminishing returns sets in when many more than about 19 exhibits are installed in a visitor center."[60] Mission 66 planning documents indicate that the Park Service anticipated record numbers of visitors—nearly ninty thousand per month by 1966—and judged the visitor center facility adequate to serve their needs.[61] By that time, Dough had retired and Superintendent James B. Myers assumed his post.

DEDICATION OF THE VISITOR CENTER

The exterior appearance of the visitor center was significantly altered by the end of the summer, with the completion of the wooden fence shielding the parking area from a clear view of the first flight markers and buildings. In preparation for the dedication, landscape architect Lewis from EODC "inspected new planting and miscellaneous construction," and the Park Service's supervisory architect, Judson Ball, reviewed the state of the visitor center.[62] By September the walks from the visitor center to the camp buildings and the main entrance gate were complete. The information desk for the lobby was delivered and installed, and planning for a permanent display of a Wright glider replica continued.[63]

The Wright Brothers Memorial Visitor Center was dedicated on December 17, 1960, the 57th anniversary of the first flight. According to one news account, a "slim audience saddened by Friday's airliner collision over New York and Saturday's crash at Munich" attended.[64] The most memorable moment in Mitchell's recollection of the event was a speech by Maj. Gen. Benjamin D. Foulois, who actually watched the Wright brothers test their early planes and flew the country's first army aircraft. Local papers covering the dedication had only compliments for the new visitor center building, and by early December over one hundred thousand visitors had already passed through its doors.[65]

If the Wright Brothers' legacy was the main focus of dedication day, over the next few years the visitor center building would become the subject of its own articles and press releases. *Progressive Architecture* had given notice of the design in 1959 and, in 1961, included a floor plan, photograph of the finished building, and close-ups of the concrete wall and terrace design in its profile of "the Philadelphia School."[66] Two years later, the "Kitty Hawk Museum" was a feature of the journal's August issue. The building received praise for its orientation and planning of interior spaces that "make visiting this national park an aesthetic as well as an instructive experience."[67] *Washington Post* architectural critic Wolf Von Eckardt called the visitor center a "simple, but all the more eloquent, architectural statement that honors the past precisely because it does not ape it."[68] The Wright Brothers Visitor Center was also singled out in "Great Builders of the 1960's," a special section of the international publication *Japan Architect* (1970), in the *AIA Journal*'s 1971 assessment of Park Service design, "Our Park Service Serves Architecture Well," and as an example of excellent government-sponsored architecture in *The Federal Presence* (1979).[69] The fact that Mitchell/Giurgola was hardly a household name in the early sixties, even in professional circles, speaks eloquently of the building's enthusiastic reception by the popular media.[70]

ALTERATIONS TO THE VISITOR CENTER

When Ehrman Mitchell re-visited the Wright Brothers Memorial Visitor Center in the mid-1990s, he was astonished by the changes that had taken place since its dedication over thirty years earlier. Mitchell was particularly bothered by the new fenestration, the areas of exterior concrete wall that had been painted white, and metal sheets covering some of the cypress wood panels. The cypress boards at the edge of the entrance terrace were an artistic "identification" that the Park Service chose to fill-in with ordinary plywood to conform to a standard bench. Mitchell was equally disappointed by changes inside the building. Visitors originally entered the lobby to face a wall of windows looking out over the ceremonial terrace to the flight markers beyond. Today, the doors open into a bookshop and an adjacent information desk. Although the wall of windows and set of double doors still form the facing wall, the view is blocked by shelves, postcard displays and Park Service personnel. Visitors are less likely to use the doors to the terrace, which are now practically behind the information desk. The floors, once vinyl tile, are covered with industrial carpeting. As 1960s photographs illustrate, the original lobby and exhibit area flowed together in a single, spacious and airy room. Today, this sense of openness is compromised by the additional furnishings.

The least visible but most extensive alterations to the building involved heating and air conditioning. The air circulation system required improvement almost immediately. Bids were opened for the work in October 1962, and E. K. Wilson and Sons, Inc., awarded the $5,684

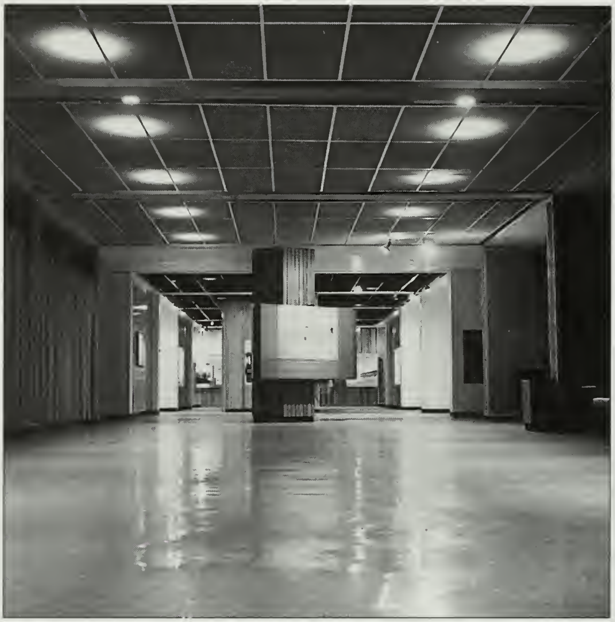


Figure 26. Wright Brothers Visitor Center exhibit area, ca. 1959. Courtesy MGA Partners, Architects, Philadelphia.

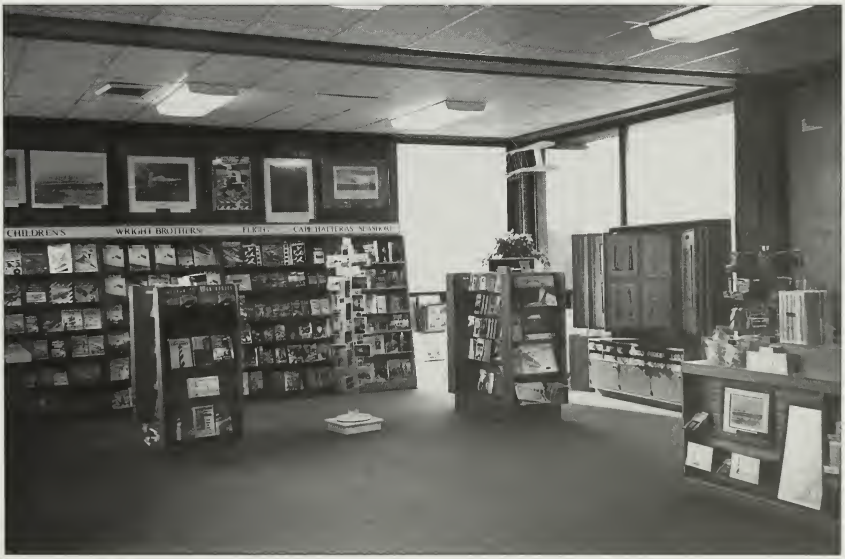
contract. Repairs included the installation of two flow meters and "three-way diverting valves in each of three zones to divert hot and chilled water from units coils."[71] In October 1968, further work was performed on the mechanical systems. The existing heat pump and associated piping and an old three hundred-gallon water tank and twenty-five-gallon compression tank were removed and a new hot water boiler installed. The air-conditioning system was also upgraded.

The most significant aesthetic alteration of the original design was performed by East Coast Construction Company, Inc., contractors from Florida who were awarded the contract for the refenestration of the building in May 1975. Along with replacing the original glass with safety glass, work included replacing steel window frames with aluminum, replacing steel casement-type ventilation windows with larger, fixed-sash aluminum windows in the assembly room, and altering door dimensions. The most dramatic change in appearance, however, was a matter of color. As 1961-1962 postcards of the building indicate, the original steel window frames and mullions were bright red-orange, a choice that drew attention to the glass areas of the walls and dome. Architect Don Benson recalls that Ann Massey chose the color to add warmth to the building.[72] The color change, increased thickness of mullions, and adjustments in their locations, resulted in marked visual differences. As much as these changes alter the aesthetic of the building, however, they do not compromise its overall form, affect visitor circulation or jeopardize the integrity of the structure.[73]

While the fenestration project was underway, the park considered a much greater change to its visitor center: the addition of an auditorium and museum extension to the north end of the building. In 1977, the MTMA Design Group of Raleigh, North Carolina, produced a full set of construction drawings for the addition. From the front, the building would appear unaltered, but a circular auditorium was attached to the north side of the assembly room and the museum extended beyond the mechanical room. A circular glider display was included within this area, as was a door into the auditorium. The exterior of the addition continued the general pattern of the building's facade, with rope texture concrete areas separated by panels of wood siding and sandblasted textured areas of concrete. On June 26, 1978, the park sent out an invitation for bids on construction of the addition, along with an expansion of the parking lot and related work. Total costs were estimated at between $250,000 and $390,000. The addition was never constructed, apparently due to lack of funds.

During the 1980s, the Park Service installed stair railings on both terraces and a handicapped access ramp alongside the restrooms. There is also a ramp leading up to the ceremonial terrace. At this time, the

Figure 27. Wright Brothers Visitor Center lobby, now the bookstore, 1999. Photo by author.



park partially enclosed the employee parking lot on the northeast side of the building with a wood fence similar in appearance to the fencing along the visitor parking lot. Most recently, in 1997, a new HVAC system was installed, which resulted in the loss of the two windows on the north side of the building. The covered air duct system, which forms a kind of cornice encircling the assembly room, was painted canary yellow. It is certain that the architects would not have chosen to highlight this aspect of the room in such a fashion.[74]

Professional photographs of the Wright Brothers Visitor Center tend to exaggerate its modern features by emphasizing the shell roof. With the barren site as a backdrop, all sense of proportion is lost. Drawings are equally deceptive; the plan appears plotted on a relentless grid. Even written descriptions distort the building's image by focusing on its relationship to contemporary airport facilities. In fact, the Wright Brothers Visitor Center is a small, relatively understated building. Despite the elevating concrete platform, it sits low in the landscape, allowing the hilltop monument to take center stage. Wright Brothers satisfies Director Wirth's mandate of protection and use. The building focuses on experience—leading visitors into the building, introducing a few facts, and then pushing them out to the site. The Wright Brothers Visitor Center was listed in the National Register of Historic Places in February 1998.

In 2000, the Park Service faces growing pressure to supplement its natural and historical parks with theater entertainment and computerized, "interactive" interpretation, both for economic reasons and to sustain public interest. Rather than overshadow the Wright's technology with our own, we might learn from Mission 66 museum specialists who worried that their interpretation would distract visitors from the park site and guarded against "overdevelopment of exhibits."[75] The Wright Brothers Visitor Center not only commemorates the achievement visitors come to marvel at, but does so without destroying what remains of the historic scene. The launching of the first flight is easy to imagine from the ceremonial terrace or high atop Kill Devil Hill.

Writing in 1997, Romaldo Giurgola recognized that the Wright Brothers Visitor Center might be considered "thoroughly insufficient" for the Park Service's current needs and visitor load. He also insisted that "the design reflected the particular period of American architecture of the early 1960s in which the rigidity of modernism evolved into more articulated solutions integrating internal and external spaces."[76] If architects and architectural historians celebrate the building's role during this period of transition in the design profession, the visitor center's greater importance lies in its status within the history of Park Service planning. Few buildings speak so eloquently about the goals of the Mission 66 program—the effort to bring the public into the action without damaging park resources, the importance of a modern architectural style representative of new technology, and the need for a functional visitor facility suitable for the next generation.

ENDNOTES

[1] Robert Perry Rodgers (1895-1934) and Alfred Easton Poor (1899-1988) both received their undergraduate architectural education at Harvard University. Rodgers went on to earn a degree from the Ecole des Beaux-Arts in 1920 and work in Bertram Goodhue's New York office. Poor continued his education at the University of Pennsylvania, joining Rodgers in the late 1920s for collaboration on an office building.

[2] "Mission 66 for Wright Brothers National Memorial" (National Park Service, Dept. of the Interior, n.d.), Wright Brothers National Monument archives.

[3] Andrew M. Hewes, *Wright Brothers National Memorial: An Administrative History* (Washington, D.C.: Department of the Interior, National Park Service, 1967), 26-7.

[4] "Preliminary General Plan, Kill Devil Hill National Monument," Eastern Division Branch of Plans and Designs, drawing # NM-KDH-1002, ca. April 1934, Technical Information Center (TIC), Denver Service Center (DSC).

[5] "Mission 66 for Wright Brothers," 4.

[6] Hewes, *Wright Brothers National Memorial*, 73.

[7] "Preliminary Plan for Wright Brothers Memorial Museum, (3 sh.) drawing #NMEM-KDH-2014, Regional Planning and Construction Division, February 4, 1952, TIC, DSC.

[8] Wright Memorial Museum Committee of the Kill Devil Hills Memorial Society, "Prospectus for a Museum to be located at Kill Devil Hills, N.C. to Depict the Life and Accomplishments of Wilbur and Orville Wright," February 1952, "Museum-prospectus" file, Kill Devil Hills Memorial Society Papers (KDHMSP), Outer Banks History Center (OBHC), Manteo, North Carolina.

[9] Conrad Wirth to David Stick, ca. August 1958, KDHMSP, OBHC.

[10] An estimate of the costs was initially provided by Assistant Director Ronald Lee in June 1952. Wirth repeated the following estimates: roads and walks: $150,000; buildings and structures: $600,000; grounds: $186,000; utilities: $38,000; exhibits and furnishings: $230,000; total: $1,204,000. Ronald Lee to Admiral Ramsey, June 10, 1952, KDHMSP, OBHC.

[11] Among these were William A. Coleman, Inc., Architects of Kingston, N.C., John Erwin Ramsey & Associates, Salisbury, N.C., and Andrew L Pendleton of Design Associates in Statesville, N.C. See "Museum-Misc." file, KDHMSP, OBHC.

[12] "Suggested Action for the Wright Memorial Museum Committee," Kill Devil Hills Memorial Society, Ronald F. Lee and Ralph V. Whitener, Executive Committee, May 19, 1953, KDHMSP, OBHC.

[13] See David Stick, "Wright Memorial Museum Committee (1959-1960)," 21; park archives, Fort Raleigh Headquarters, Manteo, N.C.

[14] Warren William Cunningham, known as "Barney," worked briefly with Mitchell/Giurgola before becoming a partner in Geddes, Brecher, Qualls, Cunningham. By the early 1960s, the firm was competing for commissions in the Philadelphia area.

[15] Phoebe Stanton, "Mitchell/Giurgola Architects" in *Process: Architecture* 2 (October 1977): 153.

[16] E. Lawrence Bellante and Alfred Clauss also received the contract for the visitor center at Mammoth Cave under construction in 1957-1958. Mitchell had left the firm by this time and did not recall the project.

[17] Interview with Ehrman B. Mitchell by the author, February 9, 1999, Philadelphia, Pennsylvania.

[18] Interview with Ehrman Mitchell.

[19] Mitchell/Giurgola designed residences for Mr. and Mrs. Crockett in Corning, New York, and the Mitchell family in Lafayette Hill, Pennsylvania, in 1958. The Mr. and Mrs. J. E. Steine Residence in Bryan, Ohio, was completed in 1959. Exhibition designs included the Far East Asia Development Project displayed in the New York Coliseum (with Wright and Mitarachi) in 1958, a design for the A.I.A. Philadelphia Chapter Centennial Exhibition (1958), and an exhibition design for the Brooklyn Museum (1959 with Kallman and Mitarachi). The firm also completed "Public Health Center No. 9" for the city of Philadelphia in 1959.

[20] Mitchell/Giurgola's University of Pennsylvania parking garage received a gold medal from the Philadelphia chapter of the A.I.A. in 1964. Their submission to the competition for the A.I.A. National Headquarters in Washington, D.C., won first place out of two hundred and twenty-one entries, but inter-agency conflict prevented its construction.

[21] The firm designed two other buildings for the Park Service, the Acadia National Park Headquarters Building (1965) in Bar Harbor, Maine, which remained in project form, and a maintenance facility constructed for Independence Park in 1975.

[22] Stanton, "Mitchell/Giurgola Architects," *Process: Architecture*.

[23] The Gold Medal Exhibition opened at the A.I.A. convention in Honolulu on June 6, 1982. The show traveled to the school of architecture at the University of Hawaii, Honolulu; the Foundation for Architecture, Philadelphia; the Graduate School of Architecture at Columbia University, New York; and the American Institute of Architects National Headquarters in Washington, D.C. See Tony P. Wrenn to Marilyn Harper, February 24, 1997, memorandum, "National Register Status of Visitor Center."

[24] For example, architectural historian Phoebe Stanton lists the Wright Brothers Visitor Center as typical of early works departing from "doctrinaire architecture," and "defined by Kahn's comment on circumstantial and form." See Stanton, "Mitchell/ Giurgola," 158. Kenneth Frampton, author of *Modern Architecture*, singles out the Wright Brothers Visitor Center as exemplifying the firm's early tendency towards "the superficial aspects of the New Monumentality, as this appeared in the more structurally ostentatious works of Eero Saarinen." See Frampton, "Forward," in Ehrman B. Mitchell and Romaldo Giurgola, *Mitchell/Giurgola Architects*, (New York: Rizzoli International Publications, Inc., 1983), 8.

[25] *Virginia-Pilot* (November 18, 1957), 29-A.

[26] William Marlin, "On Trying to Understand the Significance of Mitchell/Giurgola," *Architectural Record* (April 1976): 117-118.

[27] See Romaldo Giurgola and Jaimini Mehta, *Louis I. Kahn* (Boulder, Colorado: Westview Press, 1975); Romaldo Giurgola with Pamille I. Berg, "Kahn, Louis I.," in Adolf K. Placzek, ed., *Macmillan Encyclopedia of Architects*, vol. 2 (New York: Macmillan Publishing Co., 1982), 537-546.

[28] Stanton, "Mitchell/Giurgola," 155.

[29] Jan C. Rowan, "Wanting to Be: The Philadelphia School," *Progressive Architecture* 42, no. 4 (April 1961): 150-154.

[30] Conrad Wirth, "Mission 66 Wright Brothers National Memorial," First Flight Ceremony program, 1957; Conrad Wirth Papers, American Heritage Center, Laramie, Wyoming.

[31] Ronald Lee to David Stick, August 14, 1958, "Lee, Ronald," file, OBHC.

[32] Horace Dough, "Superintendent's Monthly Report," May 12, 1958, park archives, Fort Raleigh.

[33] "Visitor Center Development," drawing #NMEM-WB-3003 and #3003A, EODC, April 7, 1958, TIC.

[34] "Mission 66 for Wright Brothers National Memorial," 5.

[35] Romaldo Giurgola to Carol Shull, March 4, 1997.

[36] Telephone Interview with Ehrman B. Mitchell, Jr., January 25, 1999, by the author; Interview with Ehrman Mitchell, February 9, 1999.

[37] This paragraph is based on examination of over a hundred sketches in the Mitchell/Giurgola Collection at the Architectural Archives of the University of Pennsylvania, Philadelphia.

[38] Dough, "Superintendent's Monthly Report," September 12, 1958.

[39] Dough, "Superintendent's Monthly Report," January 8, 1959.

[40] Hewes, "Wright Brothers National Memorial," 1967.

[41] Mitchell, Cunningham, Giurgola, Assoc., August 4, 1958, drawing # NMEM-WB 3004, microfiche, TIC.

[42] "Two Visitors" Centers Exemplify New Park Architecture," *Progressive Architecture* 40, no. 2 (February 1959): 87.

[43] Ronald Lee to David Stick, November 18, 1958, KDHMSP, OBHC.

[44] "Mission 66 Program to be Initiated at Wright Brothers National Memorial Dual Celebration December 17," press release, National Park Service, November 29, 1957, KDHMSP, OBHC.

[45] See "Wright Brothers" museum file, ca. 1962, park archives, Fort Raleigh. This file includes an additional comment by the architects, "Patterned Concrete Wall, Wright Brothers National Memorial," which reads as follows: "It has attracted many visitors to use it as a background for snapshots and has provoked many questions as to its meaning. It means, simply, that concrete is plastic and may be effectively used to create almost any visual experience, this being one the architects believe to admirably suit the condition of structure, site and deeds."

[46] The specifications called for millwork and paneling of "Tidewater Red Cypress" with a "Clear Heart finish." Framing lumber was to be Douglas fir, Hemlock, and southern yellow pine. See "Specifications for Construction of a New Visitor Center to be Located at Wright Brothers National Memorial, Kill Devil Hills, North Carolina," Section GC-9 "Carpentry & Millwork," 9-1, park archives, Fort Raleigh.

[47] "Kitty Hawk Museum," *Progressive Architecture* 44 (August 1962): 117.

[48] The first day of bidding, originally scheduled for January 28, took place on February 4, 1959. The lowest of seven bids, $218,935 by Wilson H. Wright of Hampton, Virginia, was rejected because it came by telegraph unaccompanied by a bond.

[49] Catherine Bishir of the North Carolina State Historic Preservation Office determined that "as a seriously conceived, architect-designed work of mid-twentieth century modernist architecture" the visitor center is both "unparalleled in Dare County and the Outer Banks" and "of exceptional importance to the state of North Carolina." See Bishir, "Evaluation of the Visitor Center (Mitchell/Giurgola, 1959-1960), Wright Brothers National Memorial," North Carolina State Historic Preservation Office, January 15, 1997.

[50] "Wright Brothers National Memorial, Monthly Progress Report," February 1959, park archives.

[51] Horace Dough, "Superintendent's Monthly Report," May 5, 1959, park archives, Fort Raleigh.

[52] Dough, "Monthly Report," August 13, 1959.

[53] Dough, "Monthly Report," September 29, 1959.

[54] Dough, "Monthly Report," October 12, 1959.

[55] Dough, "Monthly Report," January 12, 1960; this team of interior designers worked at the Gettysburg Visitor Center and Cyclorama Building in 1961.

[56] Dough, "Monthly Report," July 12, 1960, and August 10, 1960.

[57] Cotton Brothers, Inc., the only party to bid on the project, received the contract for $34,228.11 on June 17, 1960. The final inspection was conducted on October 22, 1960. "Completion Report, Planting and Miscellaneous Construction, Wright Brothers National Memorial, Kill Devil Hills, North Carolina," n.d.

[58] Dough, "Monthly Report," August 10, 1960.

[59] 59,171 people visited the Wright Brothers Memorial in August 1998. See "U.S. Department of Interior Monthly Public Use Report," park archives, Wright Brothers National Memorial.

[60] Dough, Monthly Report, September 11, 1960.

[61] "Table 1: Total Annual Number of Visitors," in "Master Plan for Preservation and Use of Wright Brothers National Memorial, Vol. III, General Park Information Section C: Public Use Data," September 1963.

[62] Dough, "Monthly Report," September 14, 1960.

[63] Dough, "Monthly Report," October 17, 1960.

[64] *News and Observer* (Raleigh, N.C.) (December 17, 1960), clippings file, park archives, Fort Raleigh.

[65] "New Wright Memorial Visitors Center at Kill Devil Hills," *Coastland Times* (December 2, 1960).

[66] Rowan, "Wanting to Be: The Philadelphia School," *Progressive Architecture*.

[67] "Kitty Hawk Museum," *Progressive Architecture* 44 (August 1963): 112-117.

[68] Wolf Von Eckardt, "The Park Service Dares to Build Well," *The Washington Post* (March 29, 1964), G6.

[69] "Our Park Service Serves Architecture Well," *AIA Journal* (January 1971): 18-25; Lois Craig, et al, "The Government as Host," in *The Federal Presence* (Cambridge, Massachusetts: MIT Press, 1979), 496-7. "A View of Contemporary World Architecture," *Japan Architect* (July 1970): 65-78.

[70] The firm was also included in the *Macmillan Encyclopedia of Architects*, vol. 3 (New York: Macmillan Publishing Co., 1982), which noted its "considered response to the urban context and the natural environment, and . . . sense of place. . ."

[71] "Bids Have Been Mailed for Wright Center Work," *Coastland Times* (October 5, 1962); "$5,684 to be spent on Visitor Center Repairs at K.D.H.," *Coastland Times* (November 9, 1962), park archives.

[72] Interview with Donald F. Benson by the author, March 9, 1999, Lakewood, Colorado; Benson owns four different postcards of the exterior of the building printed in the early 1960s.

[73] National Register nomination, additional documentation, August 30, 1996.

[74] National Register nomination, additional documentation, addendum, October 9, 1997, cover sheet. The additional documentation was approved by the National Register, February 26, 1998.

[75] R. H. Lewis, draft, "Reexamination of the Museum Phases of Mission 66," June 22, 1960; Harpers Ferry Archives. A September 1965 addendum to this report singles out the "exact reproduction of the Wright Brothers' powered plane" as one of the "fine specimens" displayed in Mission 66 exhibit areas.

[76] In addition, Giurgola wrote that "for new needs a new building, separate from the existing, may be built while the old one could serve well as a meeting place for seminar classes, ceremonial receptions, etc., when properly restored." Romaldo Giurgola to Carol Shull, March 4, 1997; Ehrman Mitchell to the author, June, 15, 1999.

CHAPTER 3

VISITOR CENTER AND CYCLORAMA BUILDING

GETTYSBURG NATIONAL MILITARY PARK, GETTYSBURG, PENNSYLVANIA

The first three days of July 1863 confederate and union soldiers engaged in the bloodiest conflict ever waged on North American soil, a battle that would ultimately determine the outcome of the Civil War. Almost a hundred years later, the National Park Service attempted to provide adequate visitor facilities at the historic Gettysburg Battlefield. The Mission 66 staff had planned buildings for rugged alpine terrain, barren desert expanses, and spectacular canyon edges; Gettysburg National Military Park presented a greater challenge than even the most forbidding wilderness site. The park's physical remains alone—hundreds of monuments, stone walls, and abandoned farm buildings scattered across the landscape—could not recreate an event of such intangible yet dramatic national value.

It was the Park Service's job to help visitors understand the profound significance of this peaceful Pennsylvania countryside. Conrad Wirth, director of the National Park Service, and his fellow Mission 66 planners approved a location for the new visitor center in the midst of the battlefield, where visitors could view the notable topographical features of the Gettysburg campaign. Situated on a slight rise, the site nestled against Ziegler's Grove took advantage of a panoramic view facing the "High Water Mark" of Pickett's famous charge. The visitor center and cyclorama building would fulfill the Mission 66 mandate of "protection and use," by defining visitor areas and educating the public in battlefield etiquette. Richard J. Neutra, a native of Vienna, seemed surprised when the Park Service awarded his Los Angeles architectural firm the commission for a building on this most sacred site. In preparing his design, the renowned modernist architect and philosopher envisioned what future generations might make of the nineteenth-century legacy. He hoped that "the sad memory of an internal and still painful rift could, by the erection of a monumental building group on a battlefield and through its new dedication, commemorate what mankind must preserve as a common aim of harmony."[1] Like the Mission 66 planners and generations of Americans recovering from the world wars, Neutra viewed the cyclorama project as an opportunity to preserve national heritage.

When Neutra and his partner, Robert Alexander, began work on plans for the visitor center in 1958, major aspects of the design had already been determined. In fact, the history of the visitor center's seemingly modernist form, the concrete rotunda, can be traced back to an unusual type of nineteenth-century painting. French painter Paul Dominique Philippoteaux created several colossal cyclorama paintings in the 1880s, each of which measured the height of a two-story building and required mounting within a cylindrical structure for viewing. The cyclorama placed spectators in the center of a circle and completely surrounded them with the landscape and narrative of another world. The flat painted surface was energized by light, sound and, in some cases, a three-dimensional foreground that included artifacts related to the painted drama.[2] Philippoteaux visited Gettysburg in 1882, and over the next few years he and his assistants completed four versions of the famous battle. The preserved cyclorama, the second in the series, was painted in Paris in 1884. The Congress of Generals and Civil War veterans attended the cyclorama's opening on the twenty-second anniversary of the battle. After display in several locations, the painting was moved to Gettysburg in 1913 and privately owned until its acquisition by the National Park Service in 1941. A tile-covered building on North Cemetery Hill housed the cyclorama, but Superintendent McConaghie planned to move the painting to a better site and eventually to construct a suitable "interpretive center." The prerequisite for the commission was a cylindrical form large enough to contain the 356- by 28-foot canvas.[3]

Like the inspiration for a new cyclorama building, efforts to develop a comprehensive interpretive plan and a central visitor facility preceded the Mission 66 program. During its early years under the jurisdiction of the War Department, the battlefield was without a public museum or on-site exhibits; private guides competed for tourists to lead about the battlefield.[4] The Park Service inherited this system when it took over stewardship of the property in 1933. While the guides provided interpretation, New Deal projects supplied the man-power necessary to build roads and fences, clear land, and plant trees. The CCC helped with basic maintenance and landscaping projects from 1933 to 1942, and Public Works Administration funds covered architectural rehabilitation of selected historic structures classified into fifteen farm groups. In the meantime, the small Park Service staff concentrated on preserving historic properties, acquiring additional land surrounding the battlefield,

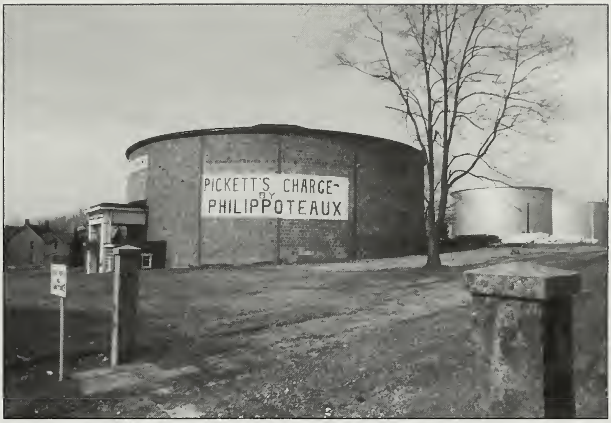


Figure 28. The cyclorama painting was housed in this ceramic tile-covered building on Baltimore Road before it was transferred to the new visitor center. The metal tanks in the background were not part of the Park Service facility. Courtesy Architectural Archives, University of Pennsylvania, Philadelphia.

and discouraging further commercial development in the vicinity. An automobile junk yard, several trash dumps, restaurants, and other modern establishments already compromised the character of the battlefield.[5]

From their crowded rooms on the second floor of the Gettysburg Post Office, park administrators dreamed of a central facility to house the valuable cyclorama, new offices, and services for visitors. Throughout the 1940s, representatives from the regional office wrestled with the choice of a building site appropriate for the painting. Roy E. Appleman, the regional supervisor of historic sites, favored "the site off Hancock Avenue adjacent the Angle," which was "almost exactly on the spot from which the cyclorama was painted." As Appleman argued, "From here the most can be comprehended by the visitor if he is unable to go elsewhere."[6] The Hancock Avenue location was not only perfectly sited for imagining the events of the battle, but also a convenient distance from the National Cemetery and an ideal gathering place for tours. For the next four years, the Park Service would engage in careful planning and debate, weighing the importance of satisfactory visitor facilities against its commitment to protect the battlefield.

Although the Park Service had been actively working to preserve and restore the battlefield since its acquisition, all prospective sites for the new cyclorama complex were located within the park boundaries. Even as he recognized that, "a building of this size is of course an intrusion on any part of the field," Superintendent J. Walter Coleman favored the location on Hancock Avenue closest to Philippoteaux's perspective in the painting.[7] Park Historian Frederick Tilberg attempted to save certain parts of the battlefield and rejected several potential sites, including a location near the Angle that he considered "an objectionable intrusion upon historic ground." And yet, neither Tilberg nor his colleagues saw any contradiction in constructing a modern building on the battlefield they were mandated to preserve. The Ziegler's Grove site offered too many advantages. From this prominent prospect, the building would enjoy a spectacular view of the battlefield, serve as a beacon for visitors coming in from Highway 15, and stand within walking distance of the museum, the National Cemetery, and Meade's Headquarters. A facility amid the battlefield's ruins and monuments could provide unparalleled service to the visiting public. Tilberg wrote up a prospectus describing the benefits of the location, the very spot Mission 66 planners would remember when the new facility finally received adequate funding ten years later.[8]

While the wartime debate over the future site waged on, Park Service architects drafted plans for a "cyclorama-museum-administration building" to replace the old facility on the west side of Baltimore Road. Several proposals were completed over the next few months, each siting the building in the "High Water Mark Area" near Ziegler's Grove between Taneytown Road and Hancock Avenue. Five extant preliminary drawings suggest that Park Service architects struggled with the project's programmatic requirements: a vast circular space for the painting, offices, a museum, a lobby, maintenance rooms, and storage areas. All of the proposals chose to house the cyclorama painting in a separate room, but the shape of this space varied. The earliest drawing in this series presents the painting within a cylindrical dome and uses the entrance lobby as a corridor to attach a rectangular administration building. The second scheme houses the cyclorama in an heptagonal building, a form that allowed the administrative spaces to share the interior walls of a more compact facility. Another alternative returns to the cylinder for the painting, but locates administrative facilities in a two-story cubic building directly in front of the main building. At this point, architects appear to have developed composite designs from their preliminary drafts. One shows a dome encircled by a heptagonal observation deck and entered through an exterior administrative wing. The final extant scheme returns to the heptagonal form but groups all administrative functions in a ground floor below the cyclorama.

All of these preliminary design proposals show buildings that would have been considered modern. Except for severe strip or rectangular windows, they are without significant ornamentation.[9] Although the cyclorama structures varied in size and architectural style, they shared a similar location. The new facility would stand across the street from the previous cyclorama building and just a few feet from a 75-foot-tall steel observation tower. As the superintendent realized, the Ziegler's Grove site allowed an acceptable replication of the panoramic view depicted in Philippoteaux's masterpiece. When the painting was declared a national historic object by the Acting Secretary of the Interior in 1945, the building project received further incentive. Restoration of the painting by Richard Panzironi and Carlo Ciampaglia, a $10,000 project approved by Congress, was another step towards obtaining an appropriate facility.[10] According to Acting Director Arthur E. Demaray, "as a result of the cleaning and stabilization work, the preservation of the Cyclorama is now assured if funds to erect a modern building to house this important work of art become available reasonably soon."[11] Funding was not immediately forthcoming but, as a "sketch of proposed Cyclorama Building to replace structure on Baltimore Street" illustrates, planning for the museum continued into the 1950s.

The Mission 66 program enabled the Park Service to produce more detailed plans of the facility it had envisioned at Gettysburg for over a decade. The location of the visitor center was a top priority in the fall of 1956. Edward S. Zimmer, chief of the EODC, visited Gettysburg with Park Service engineer Moran and landscape architects Hanson and Peetz to "discuss location sites for the proposed visitor center" with the superintendent.[12] This "reconnaissance" trip preceded the office's plans for a preliminary visitor center design drafted in February 1957. Located at Cemetery Ridge, south of Ziegler's Grove, the building stood at the edge of the trees between the Meade Statue and Meade's Headquarters. A path led from the parking lot to the cylindrical concrete building. Although the frame was reinforced architectural concrete, the exterior of the cyclorama featured "insulated metal curtain walls and anodized aluminum perforated screen." Concrete ribs tapered down from the roof to the ground, dividing the metal screen into thirty sections. The lower floor offices and visitor facilities were differentiated by "an insulated metal curtain wall and glass." Inside, the first floor was divided into a series of pie-shaped wedges around the central core, the location of restrooms and mechanical spaces. From the lobby, visitors could enter the adjacent auditorium and exhibit rooms or proceed up the ramp wrapping around the central core to view the cyclorama painting on the second floor. A revolving platform took them on a tour of the painted battle scene. Interior walls were to be covered in wood paneling and plaster and the floors in terrazzo and vinyl. The drawings show the visitor center building enclosed within a square paved courtyard surrounded by low stone walls of a random masonry pattern. A path at the far western edge of the site leads to a viewing platform overlooking the battlefield. This square, reinforced concrete structure stands along the path leading from the visitor center to the Meade Statue.

Whether Neutra and Alexander saw the Park Service drawings is unknown, but it was standard practice for the design offices to share such preliminary plans with their contract architects.[13] Perhaps more importantly, Mission 66 planners clearly articulated their general

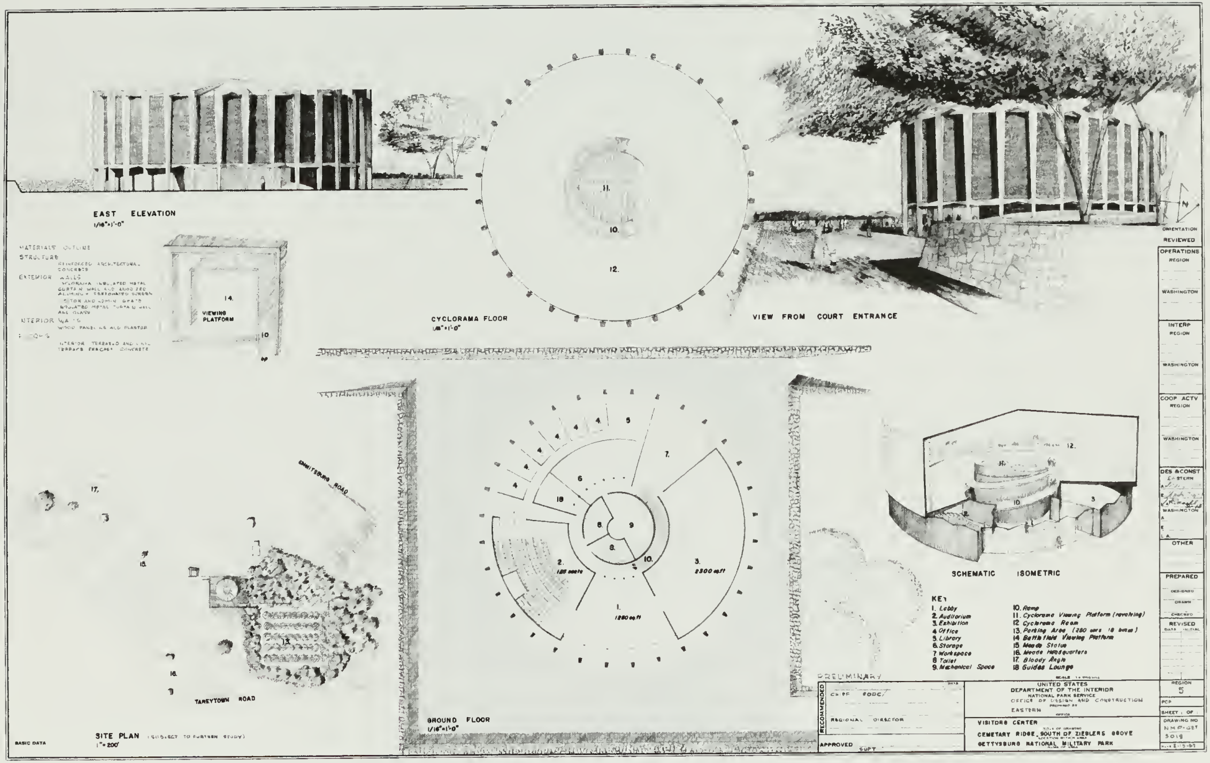

EAST ELEVATION
1/16"=1'-0"
MATERIALS OUTLINE
STRUCTURE
REINFORCED ARCHITECTURAL CONCRETE
EXTERIOR WALLS
CYCLORAMA INSULATED METAL CURTAIN WALL AND ANODIZED ALUMINUM PERFORATED SCREEN
VISITOR AND ADMIN. GRADE INSULATED METAL CURTAIN WALL AND GLASS
INTERIOR WALLS
WOOD PANELING AND PLASTER
FLOORS
INTERIOR TERRAZZO AND VINYL TERRACE PRECAST CONCRETE
14.
VIEWING PLATFORM
10
11.
10.
12.
CYCLORAMA FLOOR
1/8"=1'-0"
VIEW FROM COURT ENTRANCE
ORIENTATION
N
REVIEWED
OPERATIONS
REGION
WASHINGTON
INTERP
REGION
WASHINGTON
COOP ACTV
REGION
WASHINGTON
DES & CONST
E. STERN
WASHINGTON
OTHER
PREPARED
DESIGNED
DRAWN
CHECKED
REVISED
DATA INITIAL
17.
15.
16.
13.
EMMITSBURG ROAD
TANEYTOWN ROAD
SITE PLAN (SUBJECT TO FURTHER STUDY)
1"=200'
BASIC DATA
1.
1250 sq ft
2.
185 seats
3.
2300 sq ft
4
5
6
7.
8
9
10.
18
GROUND FLOOR
1/16"=1'-0"
12.
10
3
SCHEMATIC ISOMETRIC
KEY
1. Lobby
2. Auditorium
3. Exhibition
4. Office
5. Library
6. Storage
7. Workspace
8. Toilet
9. Mechanical Space
10. Ramp
11. Cyclorama Viewing Platform (revolving)
12. Cyclorama Room
13. Parking Area (280 cars 18 buses)
14. Battlefield Viewing Platform
15. Meade Statue
16. Meade Headquarters
17. Bloody Angle
18. Guides Lounge
PRELIMINARY
RECOMMENDED
CHIEF EODC
REGIONAL DIRECTOR
APPROVED
SUPT
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
OFFICE OF DESIGN AND CONSTRUCTION
EASTERN
VISITORS CENTER
CEMETARY RIDGE, SOUTH OF ZIEGLERS GROVE
GETTYSBURG NATIONAL MILITARY PARK
REGION
5
PCP
SHEET 1 OF 1
DRAWING NO
NMP-GET
3019
2-15-57

Figure 29. Park Service architects produced this preliminary drawing for a visitor center at Cemetery Ridge, south of Ziegler's Grove, in February 1957. The firm of Neutra and Alexander was hired the next year. Courtesy National Park Service Technical Information Center, Denver Service Center.

philosophy toward park sites, and such requirements became an essential aspect of the architects' program. The Mission 66 prospectus for Gettysburg was explicit about the "means to an end": the "preservation of the battlefield and its interpretation by more effective and modern means, each tempered with the dignity so necessary in presenting the area as a memorial, will contribute materially to the experience to be gained here."[14] Neutra and Alexander's design for the new visitor center would have to meet the criteria of both a sacred monument and a utilitarian public facility.

RICHARD J. NEUTRA AND ROBERT E. ALEXANDER, ARCHITECTS AND PLANNING CONSULTANTS

Richard Joseph Neutra was born in Vienna in 1892, the youngest child of Samuel Neutra, proprietor of a metal foundry, and Elizabeth Glazer Neutra. From his early youth, Richard seemed to know that his talent lay in the field of architectural design. As a student, he was inspired by Frank Lloyd Wright's prairie houses, and during his second year at the Imperial Institute of Technology this interest in American architecture was encouraged by the German modernist Adolf Loos. Although World War I interrupted Neutra's studies and post-graduation plans to join his friend Rudolph Schindler in America, he remained determined to visit the "new world." After several years in the Imperial Army, Neutra found work as a city architect and then in the studio of Erich Mendelsohn, a proponent of the Expressionist strain of modernism. Finally, in 1923, Neutra immigrated to America. After a few months in New York, he moved to Chicago just in time to meet Louis Sullivan. Now impoverished and dying, Sullivan had once inspired the nation with his highly ornamental steel-framed skyscrapers. At Sullivan's funeral, Neutra became acquainted with Sullivan's former student, Frank Lloyd Wright. Over the next year, he spent several months at Taliesin, Wright's Wisconsin home and studio, and he also worked as a draftsman for the Chicago firm of Holabird and Roche. In 1925, Neutra headed to Southern California, bringing with him a background in International Style European modernism and personal impressions of some of the greatest American architects.

During his American travels, Neutra gathered ideas about the country's culture and architecture for two major works—a book called *Wie Baut Amerika?* (*How America Builds*) and a utopian project known as Rush City Reformed. The book included illustrations of Wright's concrete houses in Southern California and, like Le Corbusier's famous juxtapositions of ocean liners and buildings, modern architecture adjacent to Pueblo Indian structures. A featured house by Schindler for a Mr. Lloyd in La Jolla resembled the residences Neutra would design for the Park Service in the Painted Desert. But Neutra was clearly most interested in the construction and engineering of Palmer House, a Chicago skyscraper. This mixture of contemporary and historical influences, in combination with his commitment to improving the environment through better design, lay at the core of Neutra's belief in a new architecture.[15] In his idealistic Rush City drawings, some of which illustrated the book, Neutra tried to purify the urban experience by designing his futuristic American city around the automobile, an endless grid of buildings and freeways carefully engineered for high-speed travel. Rush City was a modern metropolis without either the problems of gridlock or responsibility of historic preservation. As biographer Thomas S. Hines has observed, Rush City combined traditional European planning with Chicago School skyscrapers and the Hollywood drive-in. Although Neutra's urban utopia was never intended to be built, aspects of the project appeared in his subsequent designs for schools, community buildings, and urban planning projects. If he contradicted the rigid organization of Rush City in later work, many of Neutra's ideas about social life can be traced to this early project.

Neutra quickly made his reputation in the rapidly growing city of Los Angeles, an ideal place for experimentation. Here, he found clients eager to live in houses without nostalgic or historical associations. The residence Neutra designed in 1927 for physician Philip Lovell, a "naturopath" who practiced medicine without drugs and advocated vegetarianism, and his wife Leah, the co-director of a liberal kindergarten, became known as the Health House. It was an architectural representation of Southern California's athletic lifestyle and a perfect advertisement for Neutra's new architectural practice. Public interest in this extraordinary building was so intense that when Dr. Lovell invited those who were interested to tour the house, fifteen thousand people accepted the invitation.[16] Neutra soon became famous for energetic buildings that brought sunlight and sea air into the living space. During the thirties and forties, he designed dozens of houses, schools and public buildings along the coast of California. His progressive aesthetics, and the openness and vitality of his modern designs, were especially welcome in this untested environment. Neutra's experimental school in Los Angeles, "designed for activity rather than simply for listening," promoted a freedom in school planning that has since become standard practice.[17] Along with fellow Viennese architect Rudolph Schindler and many disciples, Neutra designed the modern architecture that is now considered traditional in Southern California. No history of American architecture fails to mention his importance.

It must have been a surprise to many when Richard Neutra, the renowned modern architect, decided to share his work with a partner. During his first years in Los Angeles, he had briefly collaborated with

Schindler, but the two didn't work well together and dissolved the professional relationship. Nearly thirty years later, Neutra was himself an icon of modern architecture whose achievements reflected a forceful personality, original architectural philosophy, and iconoclastic design concepts. With his wild white hair and piercing eyes, he appeared a stereotype of the egotistical genius. And yet, in his later years, Neutra's practice had begun to diminish. Rather than retire with a spectacular resume of accomplishments, however, he hoped to revive his career by collaborating on larger urban projects. When Robert Alexander approached him with hopes of working together on a major Los Angeles housing development, Neutra accepted the challenge.

Robert Evans Alexander was born in 1907 in Bayonne, New Jersey, and played football for Cornell University. After graduating in 1930, Alexander moved to Southern California, where he became a partner in the firm of Wilson, Merrill and Alexander. The firm gained professional notice during its collaboration with Reginald Johnson and Clarence Stein on Baldwin Hills Village beginning in 1937. This 627-unit residential development launched Alexander into the world of urban planning. In 1948, he became president of the Los Angeles Planning Board, a position that proved helpful in obtaining coveted work from the Federal Housing Authority (FHA). Alexander hoped to design one of the FHA's most prominent projects in Los Angeles—the Chavez Ravine housing—but needed the clout of a major architect to secure the commission. Neutra fit that description, and in 1949, he agreed to work with Alexander on the Ravine project. Although this controversial development was never built, the architects' collaborative experience resulted in the establishment of Neutra and Alexander.[18]

In Robert Alexander, Neutra hoped to find a colleague who could bring in larger commissions and oversee their administration. During its early years, the newly established firm obtained several major contracts, including an urban redevelopment project on the island of Guam, college buildings, churches, and elementary schools. However, even as Neutra and Alexander received design awards and a steady stream of clients, their personal working relationship had begun to crumble. The fact that Neutra and Alexander worked in separate offices did not contribute to a smooth collaboration. Neutra concentrated on the design concepts from his home in Silverlake, while Alexander tackled the firm's planning issues from an office down the block. The partnership began to dissolve during the Gettysburg and Petrified Forest commissions of 1958, with the understanding that work already begun would be followed to completion. During the final stages of these projects, Neutra continued to work from Silverlake, while Alexander opened his own Los Angeles office on South Flower Street.

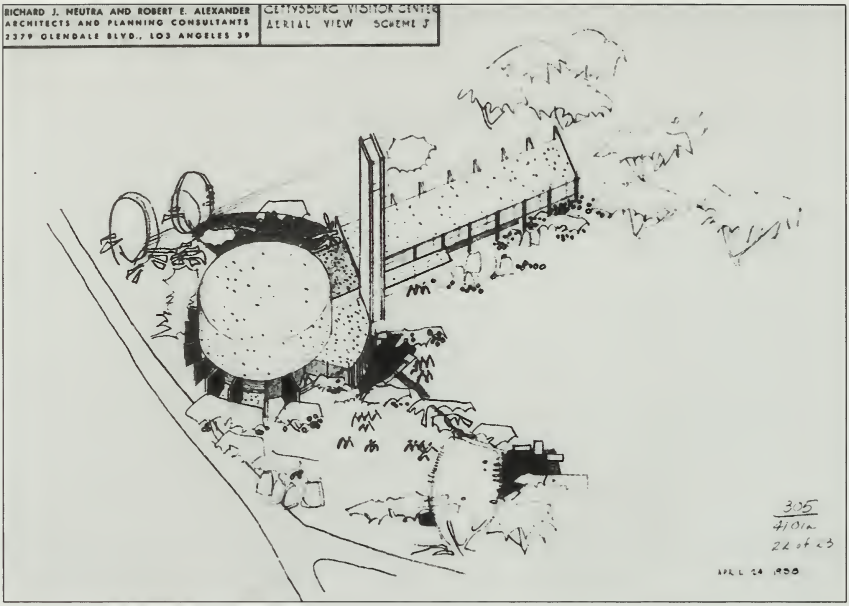
As the partnership developed, Neutra and Alexander's conflicting design philosophies became increasingly apparent. Neutra produced austere buildings based on the precepts of International Style modernism, whereas Alexander tried to soften the crisp lines and severe minimalism. Given Neutra's rigid modernist aesthetics, it must have been frustrating for Alexander to hear the philosophical rationalizations of his work. In his writings, Neutra drew on regional history, natural surroundings, and personal experience to discover universal principles, which he then attempted to represent in built form. Like other modern architects, he describes historical allusions in his work that are sometimes difficult to perceive. In a letter to Regional Director Thomas Allen he noted that "although our building consists of rolled steel sections and aluminum sash plate glazed and fabricated as of today, we have, in other aspects in our motivations of design, followed the desire to relate men's work of today with the long historical past."[19] Unlike some of his colleagues, Neutra realized that historical associations were often overwhelmed by the modernist style, and he attempted to compensate through his writings.

When *Arts and Architecture* profiled famous west coast architects in 1964, Neutra was in his seventies and had finally completed his work for the Park Service. The article portrayed Neutra not as a regional designer or a relic of the International Style, but as an architect whose significant contributions to the profession had continued to evolve since the 1920s and 1930s. If most famous for the unusual construction and philosophical ramifications of his Lovell House, Neutra had also developed the "bilaterally illuminated classroom lighted by strip window on one side and sliding glass doors on the other." In urban planning, he was responsible for city projects integrating "below grade speedways; underground parking garages; parks separating traffic and high-rise apartments; pedestrian walks about street level; buildings with ground floors open to traffic; and small neighborhood plazas." During the war years, Neutra transformed traditional materials, such as wood, brick, and glass, into innovative panels, sleek surfaces, and walls that seemed to dissolve into the landscape. Perhaps most important in understanding Neutra's contribution to the architectural profession and the attraction of Mission 66 planners to his work is the incredible consistency of his design. Because he believed that design choices developed out of human needs, he produced a fairly standard set of solutions to social problems. As the journal article pointed out, this system resulted in efficient and accurate estimates for contracting costs. Neutra's faith in the "social significance" of his architecture, his effort to create a balanced, "harmonic" relationship with the environment, and his experience with modern materials in public buildings might well have been criteria for a Mission 66 job description. Working with such an artistic personality could pose risks, but with Neutra one knew just the type of building to expect. The Park Service could be conservative in its choice of "radical" architects.[20]

DESIGNING THE VISITOR CENTER AND CYCLORAMA BUILDING

A few years after receiving the commission for the visitor center and cyclorama building, Richard Neutra recalled his initial thoughts about the future "shrine of the American nation." Like Mission 66 planners, Neutra believed modern architecture could fade into the landscape, leaving the park to display its historical legacy without interference. "Our building should play itself into the background, behind a pool reflecting the everlasting sky over all of us—and it will not shout out any novelty or datedness."[21] Modernism was bolstered by the theory that advanced materials and sophisticated technology would satisfy basic human needs, leaving nature and history undisturbed. Modern architecture attempted to "play itself into the background," not with a rustic disguise, but by minimizing the excess of such contrived designs. Shorn of all ornament and without the distraction of gingerbread or peeled logs, modern buildings pretended to be nothing but functional spaces, the very simplicity of which became their aesthetic. If the modern style broke with the Park Service's architectural tradition, the theory behind modern architecture mirrored the goals of the Mission 66 program. In retrospect, modernism could hardly live up to all of these lofty aspirations, but in the 1950s, Americans still expected an architecture transformed by technology. Throughout his many books and essays, Neutra expressed faith in the power of good design to "see organic evolution continued" and "check the technical advance in constructed environment."[22] Neutra's theories about the relationship between people and their surroundings may have made his work particularly attractive to Park Service planners.

In his memoirs of the Gettysburg commission published before the building's dedication, Neutra recalls receiving a phone call from Washington while traveling through the Arizona desert. He spoke with Secretary of the Interior Fred Seaton and Director Conrad Wirth about the building, and later personal meetings helped him to develop a design. The firm of Neutra and Alexander produced a set of preliminary drawings for the visitor center and cyclorama dated April 28, 1958. A "master plan development" drawing completed by the Park Service just the week before shows the footprint of the building oriented as the partners planned, with the rotunda end facing the High Water Mark. The general site layout also showed a road from the parking lot to Meade's Headquarters, the existing observation tower on the edge of Ziegler's


RICHARD J. NEUTRA AND ROBERT E. ALEXANDER
ARCHITECTS AND PLANNING CONSULTANTS
2379 GLENDALE BLVD., LOS ANGELES 39
GETTYSBURG VISITOR CENTER
AERIAL VIEW SCHEME J
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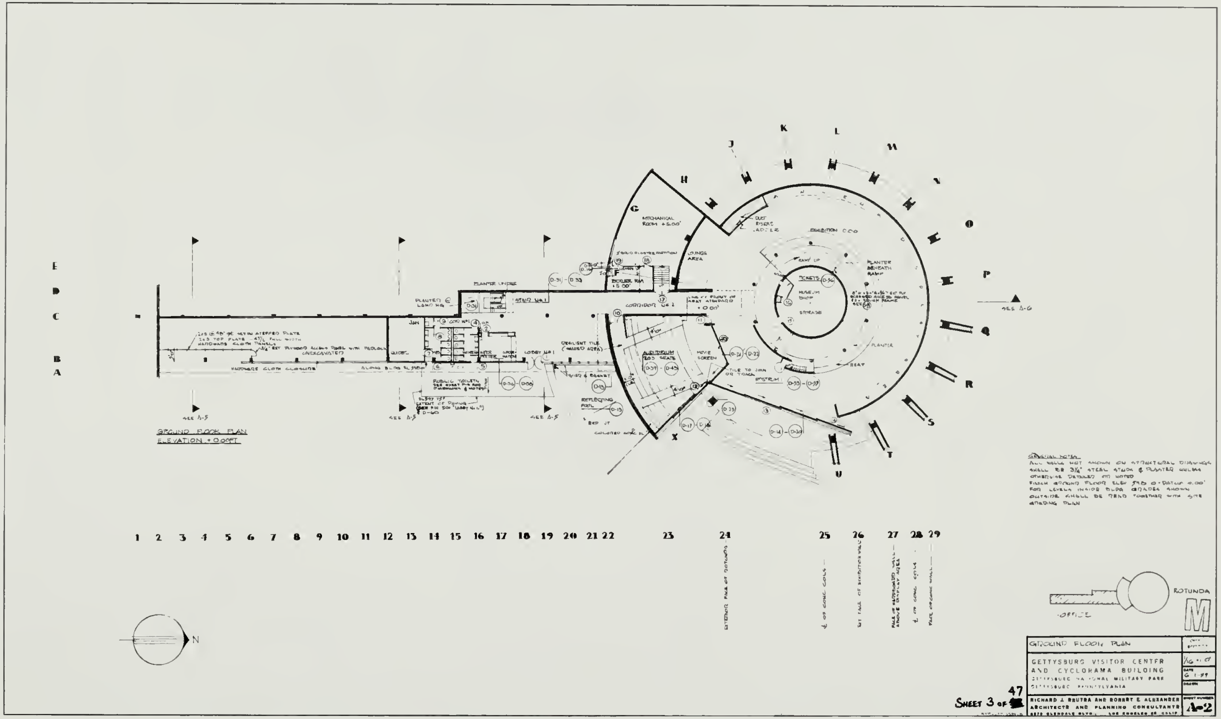
22 of 23
APRIL 24 1958

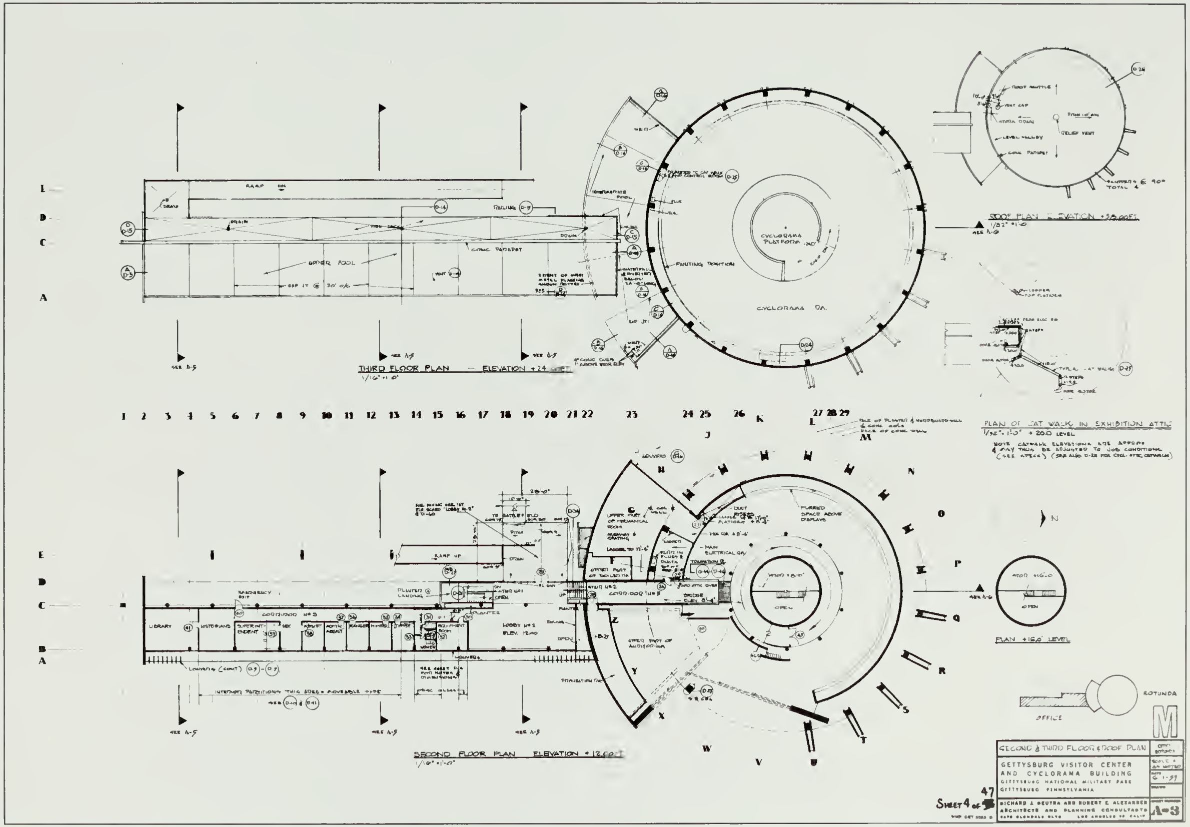
Figure 30. This preliminary drawing for the visitor center was part of a set of twenty-three sketches completed by Neutra and Alexander in April 1958. Note the nine-story observation tower and the orientation of the building. Courtesy National Park Service Technical Information Center, Denver Service Center.

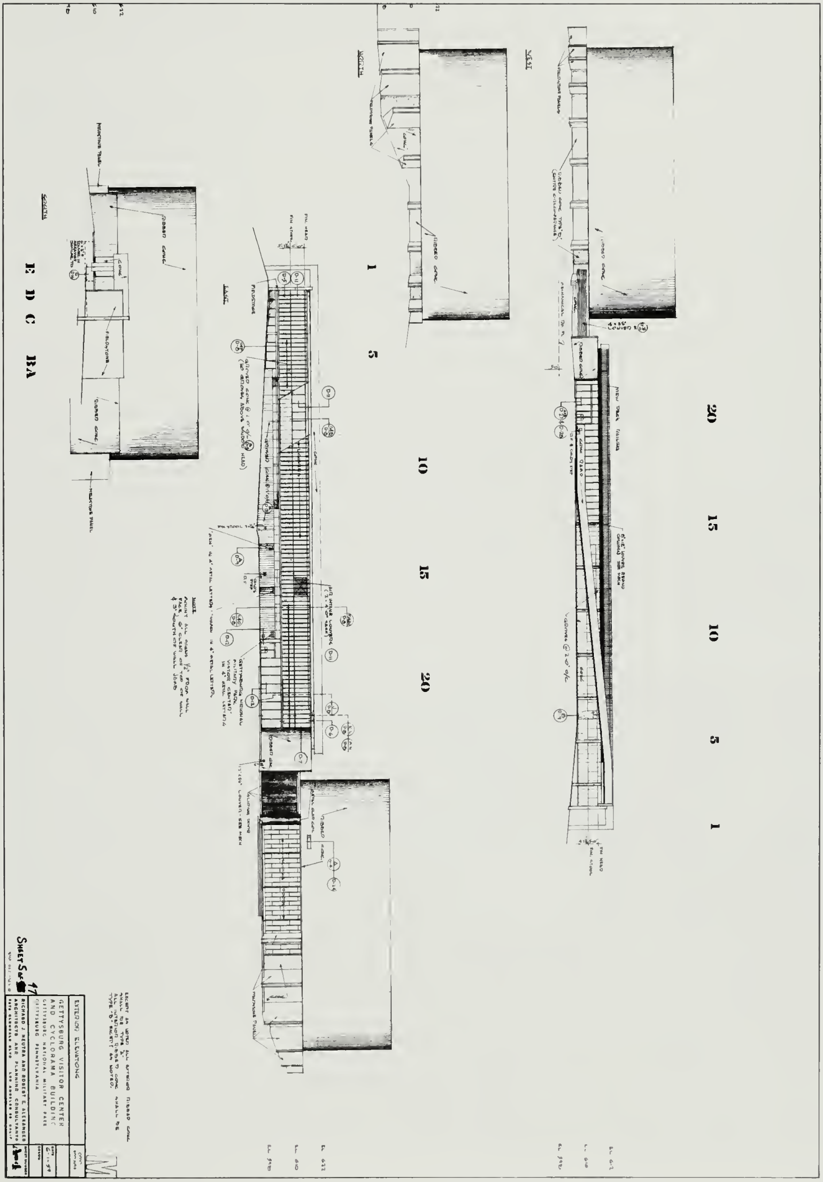
Grove, and a portion of the National Museum to the north of Hancock Avenue.[23]

In their first set of drawings for the visitor center and cyclorama, which included some sheets labeled "scheme J" and some "scheme K," Neutra and Alexander imagined a building similar in structure to that actually built, but significantly different in terms of visitor experience. The visitor center was located on the site indicated by the slightly earlier Park Service drawing: the rotunda just feet away from Meade Avenue and the space reserved for "gatherings" parallel to the road but sheltered by a stone barrier. The first scheme placed the office wing nearest the parking lot so that approaching visitors could enter the roof deck viewing area immediately or proceed to the main entrance. The outdoor promenade continued around the rotunda. Visitors could take an elevator up a slim nine-story tower located between the office wing and cyclorama. A pool was planned at the transition of the horizontal and cylindrical building forms. Circulation diagrams emphasized the visitors' approach from the parking lot to the entrance, as well as around, inside, and outside the building; the battlefield could be studied on different levels and from multiple perspectives. The set of plans also included a list of museum exhibitions, labeled and numbered from one to twenty-three.

Figures 31, 32 (page 108), 33 (page 109). Elevations and plans for the Gettysburg Visitor Center and Cyclorama Building, June 1959. Courtesy National Park Service Technical Information Center, Denver Service Center.


GROUND FLOOR PLAN
ELEVATION + 0.00FT
MECHANICAL ROOM +5.00'
LOUNGE AREA
BOILER RM
CORRIDOR No 2
AUDITORIUM 203 SEATS
MOVIE SCREEN
ROSTRUM
REFLECTING POOL
PUBLIC TOILETS
LOBBY No 1
STAIR No 1
PLANTER UNDER
JAN
TICKETS
MUSEUM SHOP
STORAGE
RAMP UP
EXHIBITION
PLANTER BENEATH RAMP
PLANTER
SEAT
UNEXCAVATED
SEE A-5
SEE A-6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
A B C D E
G H J K L M N O P Q R S T U X
EXTERIOR FACE OF ROTUNDA
℄ OF CONC COLS
EXT FACE OF EXHIBITION WALL
FACE OF HARDBOARD WALL ABOVE DISPLAY AREA
FACE OF CONC WALL
N
GENERAL NOTES
OFFICE
ROTUNDA
M
GROUND FLOOR PLAN
GETTYSBURG VISITOR CENTER
AND CYCLORAMA BUILDING
GETTYSBURG NATIONAL MILITARY PARK
GETTYSBURG PENNSYLVANIA
RICHARD J. NEUTRA AND ROBERT E. ALEXANDER
ARCHITECTS AND PLANNING CONSULTANTS
GLENDALE BLVD. LOS ANGELES CALIF
1/16" = 1'-0"
DATE 6-1-59
DRAWN
SHEET NUMBER A-2
SHEET 3 OF 47


THIRD FLOOR PLAN — ELEVATION +24
1/16" = 1'-0"
RAMP DN
RAILING
UPPER POOL
CONC. PARAPET
DRAIN
CYCLORAMA PLATFORM
PAINTING POSITION
CYCLORAMA
ROOF PLAN ELEVATION +58.00 FT.
1/32" = 1'-0"
ROOF SCUTTLE
VENT CAP
STORM DRAIN
LEVEL VALLEY
CONC. PARAPET
RELIEF VENT
PLAN OF CAT WALK IN EXHIBITION ATTIC
1/32" = 1'-0" +20.0 LEVEL
NOTE: CATWALK ELEVATIONS ARE APPROX. & MAY THUS BE ADJUSTED TO JOB CONDITIONS (SEE SPECS) (SEE ALSO D-28 FOR CYCL. ATTIC CATWALK)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
SECOND FLOOR PLAN ELEVATION +12.00 FT
1/16" = 1'-0"
LIBRARY
HISTORIANS
SUPERINTENDENT
SEC.
ASST. SUPT.
ADMIN. ASSIST.
RANGER
HIST.
TYPIST
EQUIPMENT ROOM
CORRIDOR No 3
EMERGENCY EXIT
LOUVERS (CONT.)
INTERIOR PARTITIONS THIS AREA MOVABLE TYPE
LOBBY No 2
ELEV. 12.00
PLANTER
PLANTER & LANDING
RAMP UP
STAIR No 1
CORRIDOR No 3
BRIDGE
ELEV. 8'-4"
UPPER PART OF MECHANICAL ROOM
UPPER PART OF AUDITORIUM
MAIN ELECTRICAL DIST.
FURRED SPACE ABOVE DISPLAYS
OPEN
PROJECTION
PLAN +16.0' LEVEL
OFFICE
ROTUNDA
M
SECOND & THIRD FLOOR & ROOF PLAN
GETTYSBURG VISITOR CENTER
AND CYCLORAMA BUILDING
GETTYSBURG NATIONAL MILITARY PARK
GETTYSBURG PENNSYLVANIA
RICHARD J. NEUTRA AND ROBERT E. ALEXANDER
ARCHITECTS AND PLANNING CONSULTANTS
2379 GLENDALE BLVD LOS ANGELES 39 CALIF
SCALE AS NOTED
DATE 6-1-59
A-3
SHEET 4 OF
47


WEST
NORTH
EAST
SOUTH
RIBBED CONC
EXCEPT AS NOTED ALL EXTERIOR RIBBED CONC SHALL BE TYPE "A". ALL INTERIOR RIBBED CONC SHALL BE TYPE "B" EXCEPT AS NOTED.
EXTERIOR ELEVATIONS
GETTYSBURG VISITOR CENTER AND CYCLORAMA BUILDING
GETTYSBURG NATIONAL MILITARY PARK
GETTYSBURG PENNSYLVANIA
RICHARD J. NEUTRA AND ROBERT E. ALEXANDER
ARCHITECTS AND PLANNING CONSULTANTS
LOS ANGELES 26 CALIF
DATE 6-1-59
SHEET 5 OF 17
A-4

Although the firm's general idea gained approval, the Park Service preferred a less conspicuous version of the design. The partners worked on revising drawings over the next year, finally submitting a second set dated June 1, 1959.[24] In an effort to minimize the rotunda, the building plan was flipped so that the cylinder was partially sheltered by the grove of trees. The viewing tower and rooftop promenade around the rotunda were removed from the program. In the revised design, the viewing deck offered a clear vista of the battlefield, but the entrance to the deck was no longer so obvious. The architects attempted to improve the ramp situation by adding a system of reflecting pools, one of which paralleled the viewing deck. According to project architect Dion Neutra (Richard Neutra's son), this was an effort to "entice people to disperse themselves along the length of the building to view the battlefield" and thereby avoid "the crush at the top of the ramp."[25]

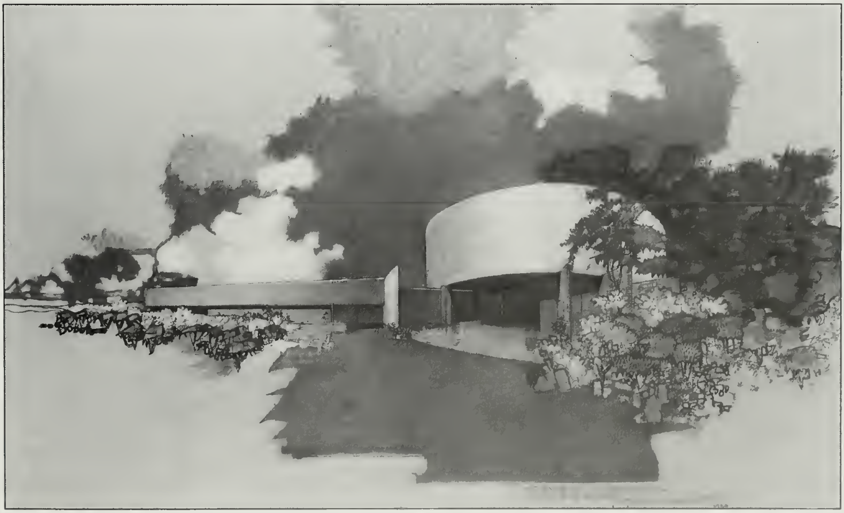
Throughout this revision, the firm envisioned the contrast between the building's modern materials—steel, glass, aluminum, and concrete—and the random masonry walls and panels built of local stone. In the design of their courtyard stone wall at the Painted Desert Community, the architects looked to ancient desert dwellings for inspiration. At Gettysburg they also attempted to integrate regional building traditions and planned to find a suitable example of local masonry in a nearby historic building. During the next two years of construction, the architects became obsessed with perfecting the stone walls based on the selected historic prototypes. This relatively minor aspect of the finished building represented something more to the architects. It was both a departure from Neutra's earlier work and, perhaps, a concession to the unique park site.

The specifications for the revised visitor center included a "personal word to the bidder" intended to encourage good faith and open communication throughout the construction process. The firm anticipated that contractors might find certain unfamiliar practices in need of clarification. In an addendum to the specifications produced about three months later, Neutra and Alexander described an extra artistic flourish: the addition of a final spray coat of glitter finish applied directly to the wet cement with a "specifically designed spray gun." The glitter was small flakes of "diamond dust" (mica) applied to the white areas of cement at a concentration of four to five pounds for each hundred square yards of surface. The addendum also included explicit instructions for the design of the ribbed concrete and the elimination of any form marks that might interfere with the vertical pattern. For the next three years, the contractors and architects would struggle with these requirements. Along with the technical specifications, the firm developed a more artistic presentation of the building for the client. Neutra created a pastel rendering of the building from the Hancock

Avenue approach; the white form accented in turquoise and purple was surrounded by green grass and a forested background.[26] The architects also produced a brochure with studies of the cyclorama building, a copy of which was sent to Superintendent Myers.[27]

Since the project's early planning stages, Mission 66 planners had anticipated many benefits from their new visitor center and cyclorama, but they also worried about the impact of growing numbers of tourists and businesses attracted to the area. The 1960 Master Plan articulates some of the park's concerns about modernization, pointing out that "Gettysburg's popularity has meant increasing commercial and housing development which, even now, is destroying its attractive rural character and detracting from the Park itself."[28] Although complaining bitterly about private enterprise and the excesses of "commercialization," the Park Service was enthusiastic about its own modern roads and visitor facilities. If these were intrusions on hallowed ground, the benefit of necessary improvements would far outweigh any damage. The new visitor center would serve as the "initial point of contact and orientation," a role facilitated by its location at the juncture of six highways. Visitors could "refresh their memories on the stories of the battle and the Gettysburg address, obtain literature, and, if they wish, the services of a battlefield guide who is licensed and supervised by the Superintendent of the Park. Here they may also view the impressive Gettysburg Cyclorama which depicts a moment in the climax of Pickett's Charge and should inspire them to accept the Park's invitation to take its walking tour to the scene of the charge itself."[29] This site had

Figure 34. "Gettysburg Visitor Center, view from the east," pastel by Richard Neutra, 1959. Courtesy National Park Service Technical Information Center, Denver Service Center.



the distinct advantage of permitting the study of the battlefield from its observation deck, surrounding paths, and walking tour. Mission 66 planners understood that, while park staff and Civil War enthusiasts might best imagine the events of the battle unfolding on a site free of modern intrusions, the average visitor looking out over the site saw ordinary fields dotted with curious statues. The purpose of Mission 66 was to benefit millions of anticipated visitors, and to this end the visitor center would bring life to the historic landscape.

BUILDING THE VISITOR CENTER

In mid-August 1959, the EODC was in midst of reviewing the plans, and bidding on the visitor center and cyclorama building opened September 29. The contract was awarded to the Orndorff Construction Company, Inc., of Camp Hill, Pennsylvania, for its bid of $687,349, an estimate $45,000 less than the second lowest proposal.[30] Total construction time for "one of the largest buildings in the way of Visitor Centers to date" was projected as a single year; it was Director Wirth's particular hope that the building could be dedicated while President Eisenhower remained in office.[31] The project's four primary contractors officially began work on November 18, though the electrical, cooling and heating, and metal workers awaited Orndorff's preparation.[32] Within a few days, the construction company had a tractor trailer at the site and inspectors checking elevation lines established by EODC Engineer Westerfield. According to the contract specifications for the visitor center, the rotunda was to be prepared for installation of the cyclorama painting within just one hundred and eighty days. To meet this tight deadline, the contractors were advised to give priority to the construction of the concrete drum.[33] After excavating a footprint 130 feet in diameter and digging spread footings, contractors began driving piles for the rotunda foundation. They were surprised to find that the rock did not meet required standards; in fact, it didn't appear to be the same material obtained by prior tests. Upon further investigation, the contractors discovered the building had been moved about twenty feet since the initial foundation inspection. During their December 17 site visit, the architects hired an expert to analyze the situation. Robert J. Stickel, a civil engineer from Camp Hill, Pennsylvania, suggested shifting the building an additional twenty feet to the east.[34] Throughout these inspections, the construction company insisted it could "do nothing until the center pivot point was established by the survey crew."[35] By January 1960, Neutra and Alexander had revised the foundation plan. Over the next month, the remaining footings were custom designed to suit their varying site conditions.

In early December, Neutra and Alexander congratulated the Orndorff Company for recognizing the "national importance" of the future building.[36] The architects had received the contract to supervise construction of their design, and it was in their best interest to anticipate mutual cooperation in the work ahead.[37] Over the next few years, both principals of the firm would visit the site many times and respond to everyday questions by mail and telephone. Dion Neutra remained based in Los Angeles, but represented the firm in official correspondence and on many site visits.[38] Weekly supervision of construction was undertaken by one of Richard Neutra's former assistants, Thaddeus Longstreth, who had since opened a private architectural practice in Princeton, New Jersey. As the firm's "eastern representative," Longstreth maintained a weekly record of construction progress, logging nearly one hundred supervisory reports between November 1959 and March 1962. He focused on "the interpretation of the plans and specifications from an architectural and aesthetic viewpoint rather than the mechanical aspects of the building."[39] Technical matters were the prerogative of subcontractors in California, including mechanical engineer Boris M. Lemos, electrical engineers Earl Holmberg and Associates, and the firm of Parker, Zehnder and Associates, consulting structural engineers. In addition, the project was under scrutiny by David O. Smith, the project supervisor. Although a Park Service employee, Smith acted as a liaison between the government and the architectural firm. The highest authority in the Park Service with intimate knowledge of the project was John B. Cabot, supervising architect of the EODC in Philadelphia, but even Cabot declared Gettysburg Superintendent James B. Myers the official "owner" or client. Along with these overseers, the crowd at the construction site included Willard Verbitsky, a 340-pound superintendent known as "Little Willie" by his co-workers at Orndorff Construction. Both John J. Bordner, vice president of Orndorff, and President Brickley S. Orndorff stopped by to check on progress and handled the project's substantial correspondence with its west coast designers. The construction company hosted an introductory dinner for the group on December 17, 1959, a few weeks after work had officially begun.

While the foundations were under scrutiny, the architects turned their attention to sample panels of the stone walls. Although the requirements for the stone masonry may have appeared stringent, the contractors had been forewarned by the building specifications, which stipulated every detail—from the three sample panels to the provision of a local example for the mason's examination.[40] The stone required in the specifications was native "'Arcure' Pennsylvania Sandstone in the tan, brown or buff color range." As the architects explained, the most aesthetically pleasing masonry pattern consisted of "darker and larger stones . . . nearer the bottom of the piers and color and size graduating toward the top to lighter and smaller pieces."[41] They also indicated that the sides of the piers as seen from the east were most important and that the very best stone should be reserved for the four piers nearest the entrance.[42] In preparing the sample, Longstreth and the contractors explored the surrounding area for historic examples of the desired "random rubble ashlar pattern with more irregular, triangular shapes."[43] The Vickery Stone Company of Upper Darby, Pennsylvania, dumped approximately 155 tons of Blue Mountain split-face Pennsylvania sandstone at the job site on February 25, 1960. The architects hoped to have the panel erected by December so that it could weather over the winter.[44]

Despite efforts to get off to a friendly start, the foundation problems inspired more doubts than confidence. When construction was still in its infancy, the architects warned Orndorff not to substitute less expensive or more accessible products for those specified in the contract. Neutra and Alexander insisted they could "not accept very much deviation for design reasons."[45] The firm's adamant adherence to specifications became a problem for the contractor because high-quality products were difficult to obtain; both parties disagreed on what they considered suitable substitutes for specified items, and such commitment to high standards resulted in countless delays. For example, the architects selected expensive Japanese tile distributed by a Los Angeles dealer to cover the inside of the cyclorama ramp.[46] This decision not only resulted in considerable delays, but evoked disapproval from those committed to the Buy American Act. The fact that the architects supervised construction undoubtedly helped the contractors understand the complex project, but it also allowed the design process to extend into the construction phase; the designers could not resist enhancing the building's aesthetics whenever possible. Rather than simply directing installation of the original tile, the firm continued to imagine new effects, envisioning "a mixture of two closely related shades of dark brown or black, perhaps alternating vertical strips to give a very subtle corduroy-like effect as a backdrop for the stainless tubes" and with a matte glaze to prevent any "glitter."[47] Regardless of additional time or expense, the architects based decisions on aesthetic issues and structural considerations that might effect the performance of the building. While such practice resulted in exceptional quality, the contractors and subcontractors were sometimes baffled by what they interpreted as capricious decisions.

When the spring building season began in early March 1960, the foundations were in place, and the architects focused their attention on concrete forms. Once the outer form work for the rotunda was finished, pouring began. The first pour was completed in sections between columns. The contractors worked their way around the circle, leaving space for the auditorium doors, and then moved on to the next vertical wall segment. Scaffolding was erected to hold workers and concrete in place as the layers of lifts accumulated. The rotunda's inner form was begun in August, and as construction progressed, it advanced in height along with the exterior. Photographs of the unfinished concrete shell in September show a fortress equally as impressive as the final product. The remaining wood scaffolding, with its tiny ladders still climbing up the side of the building in December, gives a sense of the incomplete rotunda's huge scale; in contrast, the finished form would ultimately succeed in dissolving into the grove, at least as much as could be expected from such a massive shape. The cylinder was of ribbed concrete, a decorative vertical pattern that required precise formation.

In the same way that Neutra and Alexander insisted on perfecting the rough and random look of the stone masonry, the architects were determined to achieve a "crisp and clean" contrast in the concrete. The aesthetics of both interior and exterior could suffer from shoddy form work, careless concrete preparation, or improper pouring. Although Park Service project supervisor David Smith warned against using prefabricated plywood panels, the contractors objected to the expensive 1- by 6-foot shiplap required in the specifications.[48] In a letter to Orndorff, Dion Neutra explained why seemingly insignificant details of the concrete process were aesthetically important and mentioned similar techniques used by other architects, such as the "Unesco Building in Paris and any recent work by Le Corbusier," to illustrate his point.[49] Such modernist buildings used concrete to create "pure" forms without any suggestion of their fabrication. The capacity of concrete to take on a smooth, sleek appearance in a variety of shapes was the very reason it became a featured material of modern architecture. The cyclorama ramps under construction might prove expensive and challenging to design properly, but they would also contribute to the building's streamlined aesthetics. Chamfer strips were removed from exposed corners because they made "the building look clumsy and warehousey rather than sharp and crisp."[50] According to Dion Neutra, such attention to detail was "why the Park Service went west for their architect, and why this will be a distinguished building with all of us working on it, dedicated to this proposition."[51] The firm finally compromised by allowing plywood forms in unexposed areas, such as the inside curved surface of the mechanical room and the portion of the rotunda hidden by the painting. Some covered areas, the outside surface of the central drum in particular, required shiplap to produce "a true curve." Although the firm anticipated a certain amount of rubbing out of form lines, they preferred to "have as little patching or rubbing as possible, but rely rather on the best form work to avoid problems."[52]

As Neutra and Alexander and contractors debated the importance of proper form preparation, they also confronted deficiencies in structural concrete. The concrete columns in the main rotunda, alphabetized from F to Z, each required proper footings and piers. Park Service supervisor David Smith reported on defective concrete in the main R column that extended from the foundation to the support of the cyclorama drum; Longstreth's construction report described the problem as "stone pockets" that compromised the density of material.[53] The architects immediately demanded the removal and replacement of the column. They were alarmed "to think that these results are being obtained on a building that will depend in such large measure on the quality of its concrete finish."[54] Later that month, the adjacent T and S columns were discovered to be equally faulty and also required removal.[55] Upon further inspection, it was determined that the "honey-combing and stone pockets" resulted from the failure to adequately vibrate the concrete. Soon after, Smith reported "errors" in the footings and asked for suggestions. Toward the end of April 1960, he agreed to make a surprise visit to the concrete mixing plant to take test samples of sand and aggregate.[56] In the meantime, Brickley Orndorff promised to write the company with his complaints. Flawed concrete preparation, usually a result of improper vibration, plagued contractors and architects alike for the duration of the project.

Despite the construction problems, "the Lincoln Memorial at Gettysburg" was included in a profile of the firm by *Pacific Architect and Builder* in May 1960. An aerial view of the building from the entrance facade, rendered in pastels or watercolor, showed the three reflecting pools darkened and the rotunda dwarfed by surrounding trees. The short description of the building noted that it was under construction "on the famed battlefield some 200 yards from where President Lincoln made his speech," and stood "only a stone's throw from the horrifying spot where the contest found its climax." The location of the building was clearly considered an admirable quality.[57]

The architects returned to the aesthetics of the stone masonry piers and walls in mid-April 1960, when a sub-contractor began work on a second sample panel. During construction Longstreth deemed the panel too similar to the initial rejected attempt. The frustrated mason described his previous success erecting stone walls for the National Park Service at Camp Green Top (Catoctin Mountain Park) in Thurmont, Maryland. Longstreth visited the park, only to find that the walls in question were "too polychrome in range with a preponderance of square shaped pieces."[58] After Cabot and Neutra inspected the work the next month, they accompanied contractors to an old barn on Route 116 west of Gettysburg. A corner of the structure exhibiting the desired variety of stones and mortar thickness became the example for visitor center masonry.[59] On June 21, Longstreth and Bordner traveled to the Blue Mountain Stone Quarry ten miles northwest of Harrisburg in search of stone that might cut into satisfactory shapes. They discovered two potentially useful types of stone—one with a "regular" effect when cut and the other likely to form "larger irregular shapes" but too gray in color.[60] The quarry owners were so sure of success that they volunteered to construct a product sample for the architects' approval. Longstreth and Smith then accompanied them to the exemplary barn to see the desired stone pattern. The next week, the quarry owners erected the sample from stone on the site supplemented with their own Blue Mountain stone. Longstreth reported that this panel "showed great improvement over previous efforts, having more irregular shapes, thinner dry-wall appearing joints, larger and darker stones at the base."[61] Nevertheless, he felt that the nature of the rock still hampered efforts and further construction would require constant supervision. He hoped that the principles learned while building the samples could be transferred to the field, allowing the masonry covering the sides of the rotunda's external concrete piers to become "fieldstone panels." The five piers nearest the main entrance extended beyond the edge of the rotunda and created a platform for the concrete cylinder.

Once the mason had actually erected part of pier R and column P, Longstreth commented on the lack of color variation; tones were supposed to graduate from dark on the bottom to lighter nearer the top. He also demanded thicker, darker stone for the panels, noting that the thinner stone might be reserved for the center of the walls. The stones were to appear naturally chunky and randomly selected, but the wall itself required proper alignment. In terms of pattern, Longstreth asked the mason to avoid "uphill joints" or stones laid too vertically. The mason was to begin with the least visible piers, such as the north side of pier Q, before moving on to the featured south facade.[62] During supervision of the pier work in early November, Longstreth warned the mason of "downhill joints," and suggested that he constantly stand back from his work to avoid such monotonous effects. Although larger and wider stones were now in use, the color range was still disappointingly small and the joints too horizontal. Given the range of colored stone provided and its varying appearance when split, Longstreth felt that only constant effort would achieve the desired results.[63] By this time, John Cabot had given Longstreth full authority over this aspect of the project.[64]

In the fall of 1960, as work began on the interior surfaces of the building, aesthetics took precedence once again. When Orndorff submitted vinyl wall covering for the office partitions, the architects were horrified by samples that "might do in a bar or club, but not in this type of structure."[65] They also disapproved of the wood sample panels, noting

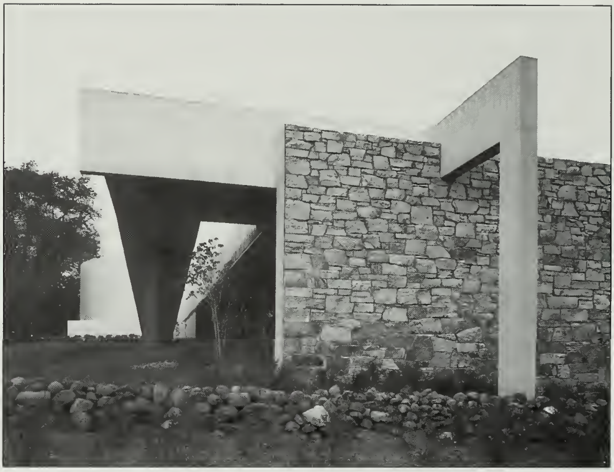


Figure 35. Stone panel and stone wall on the south end of the office wing, 1962. Photo by Lawrence S. Williams, Inc.

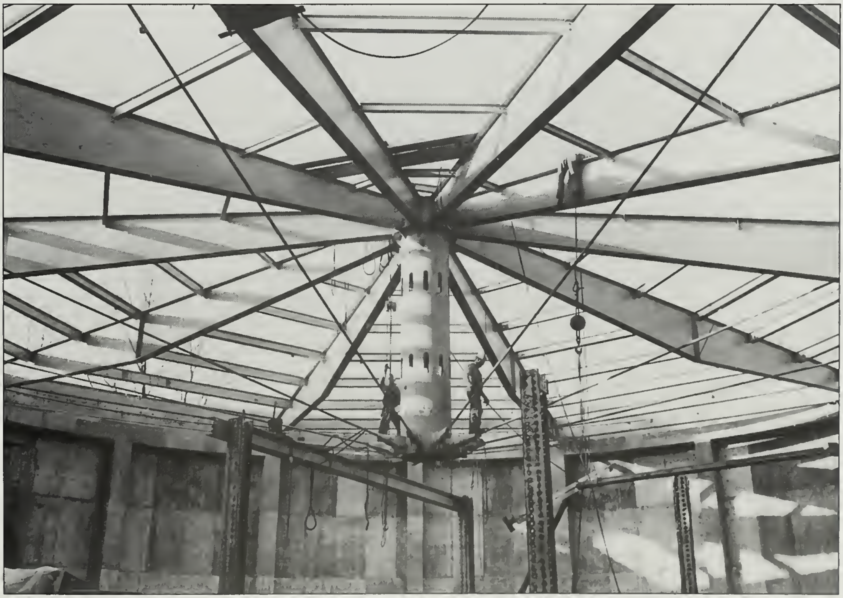
"the dust and pock marks, as well as the too-glossy finish," a result far different from the sought after "satin, even, low sheen, full bodied, rubbed effect." As for the colored concrete required in the exterior ramp, the architects preferred the chocolate color supplemented with abrasive additives for additional texture. Orndorff sent three samples sealed differently but all including sidewalk grain chips, and not very tactfully indicated that the architects had now received "the full range of the colors as manufactured by A. C. Horn."[66] The next week, the architects reported the lack of any attempt to use silicon carbide (alundum grains) to create the specified textured surface.[67] To complicate matters, the exterior ramp required extensive structural revisions. While the architects complained about the contractor's interior selections and form work, the Park Service blamed the architects for a five-month delay in submitting a finish schedule.[68] Even as they exchanged complaints, however, all parties pressed on. Orndorff scheduled terrazzo work in December, beginning with the ground floor lobby and restrooms, continuing to the second floor office wing and then entering the cyclorama.[69]

During the slow and difficult interior design phase, work on the cyclorama roof proceeded quickly and relatively harmoniously. In a September 1960 report to the architects, Parker, Zehnder and Associates explained details of the construction joints for the cyclorama beam, wall, and floor. The appearance of the concrete forms changed significantly in October, when contractors began to erect steel girders and beams for the rotunda roof. Two cranes were required, one to place the cyclorama roof steel and another to lift the concrete for the interior columns. Project Supervisor Smith updated the architects on conditions at the site and described his view of future progress:

> As it stands now, the center post is solidly supported 2' above the final elevation and 6 girders from J clockwise . . . inclusive are attached. After the cyclorama wall is completed, the other four beams and purlins will be erected and the cables connected. I assume at this time the blocking will be removed (although I see no provision such as wedges to do this) letting the center post settle to its final elevation. I assume this is the correct point in the installation for the welding of the beams to the center post.[70]

Neutra visited the site around Christmastime specifically to photograph the interesting spiderweb pattern created by the rotunda's exposed steel framing and endured "great pains and great physical discomfort" in the process.[71] According to Smith, the revealed roof structure had already attracted much attention. The Bethlehem Steel Company took pictures of the cyclorama drum and roof structure for a full-page advertisement and brochure publicizing its bridge cables. The rotunda roof was built around an 18-foot center column suspended with steel purlins radiating outward above a system of "prestretched and proofloaded bethanized bridge strand."[72] The bridge cables were attached to the base of the central column and to the upper perimeter of the cylinder, forming a flexible "web" of fibers. After the erection of the steel but before installation of the gypsum roof, the cables were

Figure 36. Gettysburg Visitor Center and Cyclorama, view of the roof structure under construction, December 1960. Courtesy National Park Service Technical Information Center, Denver Service Center.



adjusted to vertically align the central column. The framework of purlins and girders above resembled a wagon wheel. One of the photographs in Neutra's *Buildings and Projects* shows two men near the central "trunk" dwarfed by the steel umbrella overhead. Views were also taken from above the cyclorama, probably from one of the cranes used in the construction process. It was a dramatic photo opportunity and one that would soon disappear under layers of lath and plaster. By the following summer, the roof scuppers had already become filled with leaves, and Smith planned a regular inspection schedule to keep the drains clear.[73]

The firm's specifications emphasized their quest for "Architectural Effect," a subjective standard they strove to achieve through materials, methods, and even decorative art. Bush-hammered columns formed an important part of the original interior scheme, and as the project progressed, this rough appearance became increasingly desirable. While contemplating the color scheme, the architects decided to leave all bush-hammered columns in their natural state to expose the black aggregate and reduce the quantity of dark brown.[74] After the bush-hammering process, columns required additional work to "remove the spiral form marks and to give surface variation as called for in specifications."[75] In February 1961 all parties agreed that bush-hammered columns should be left natural on both the interior and the exterior. And by the next month, the preference for bush hammering included the bench surrounding the museum exhibits. The Park Service issued a change order to reveal the aggregate in the circular museum bench, "upon consideration of the color scheme for the building, and after seeing the effective result of the exposed aggregate in bush-hammered surfaces at various locations in the building."[76] The architects also improved the transition from the second floor corridor to the cyclorama ramp by substituting stainless steel for galvanized iron in the bridge spanning the exhibit area. Since the ramp was enclosed within a stainless steel cage of the same material and style as the rostrum, this choice unified the metal work in the museum. The transition plate was actually thin strips of steel with enough space between to create a dizzying effect when looking down at the terrazzo floor below. The plate and corresponding balustrade also provided support for a glass mural.

Just as they imagined the "floating" office wing, the architects conceived of a dramatic interior with office partitions "shooting on into the corridor and the feeling of the long vista of the windows continuing beyond."[77] Demountable partitions of the "flush movable type" produced by the Neslo Manufacturing Company in New York separated the office space in the second floor administrative wing. This system allowed removal of any panel in any order without affecting other partition walls. The individual laminated vinyl panels could be taken apart and rebuilt if necessary.

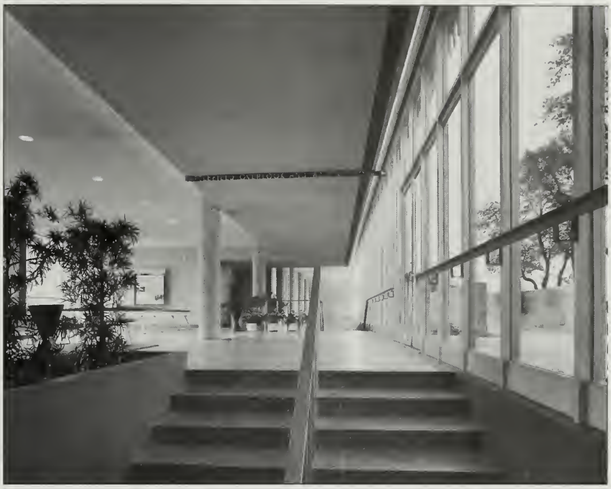


Figure 37. View looking south into the second floor lobby space, with offices beyond. The ramp up to the battlefield overlook is visible outside, 1962. Photo by Lawrence S. Williams, Inc.

By mid-summer, architects and contractors prepared for work on the building's unusual solar window shade system. The entire east office window wall was covered by exterior louvers, which created a pattern of vertical lines that changed in width as the shades were manually cranked open or closed. The louvers were fabricated of ALCOA aluminum covered with a Lemlar primer and two coats of baked enamel finish. As Dion Neutra explained to the EODC, his father was "recognized as perhaps the originator of this type of solar control, having first used it some twenty years ago, when every piece had to be custom made." In 1956, the firm's Northwestern Mutual Fire Insurance Office (1951) was included in a book about innovations in aluminum construction.[78] This building is dominated by vertical aluminum louvers that extend from the 7-foot office windows beyond the spandrel below, producing a unified front facade. As Neutra reported, the architects had used the same design in more recent local projects with excellent results. He may have been thinking of the Amalgamated Clothing Workers Building (1956) near Wiltshire Boulevard or current work on the Los Angeles County Hall of Records, which featured "base-to-cornice light controlling, energy-conserving louvers" constructed about the same time as the visitor center.[79] In addition to the streamlined vertical lines of the louver pieces, the architects appreciated their transparency, which gave a contrasting sense of lightness to the surrounding concrete.

During construction, the architects decided to change from the manual louver controls to the Lemlar Manufacturing Company's system of automatic solar adjustments. The park hesitated to spend the extra money necessary for this luxury, but the architects were persuasive. According to Neutra, there were practical reasons for mechanizing the louvers. People tended not to adjust them until they were very uncomfortable and, once closed, they would usually remain shut since artificial lighting was provided. This "greater dependence on automation and push-button living" increased as the world modernized. Dion Neutra sent the park a letter from the manufacturing company stating that the cost of operating the louvers automatically would be less than the expense of hiring someone to turn the hand crank throughout the day. Lemlar suggested that curious park administrators inquire about the louvers at a milk company in Camden, New Jersey, where they had been installed in 1957.[80] After some delay due to travel engagements, John Cabot resolved the situation by explaining the Park Service's hesitancy to install "mechanical gadgetry." Nevertheless, Cabot was willing to approve the louvers, if provided with a hand crank for emergencies and the chance to review additional costs. The company's promise to install the mechanism itself sealed the deal.[81] The Lemlar Manufacturing Company sent their sun louvers to the site April 27, 1961.

The cyclorama's motorized doors could become an equally dynamic aspect of the main entrance facade, but they were only intended for use on special occasions. A portion of the east rotunda was outfitted with mechanical sliding doors, and a wall of the auditorium operated on a pivot. When both doors were opened, the museum became a speaker's platform and the south lawn an expansive seating area. The architects chose the Ferguson Door Company of Los Angeles to manufacture the motorized sliding and swing doors. After reviewing the Ferguson Company's installation and drawings, the architects were pleased with the workmanship of a complicated, technical project. They looked forward to the "spectacle" of watching "the doors all operating at once."[82] The next spring, project supervisor Smith reported that the "pattern sheets" for the Ferguson doors were undergoing a final adonizing test. The architects advised waiting to install the door panels until after all sandblasting, Thoroseal application, and plastering had been completed.[83] Finally, in early August, only a delay in the arrival of the doors prevented the Park Service from hanging the painting."[84]

If the louvers and walls only operated at certain times, the building's water features provided a constant source of stimulation. A few months earlier, the concrete had been poured for the upper pool on the office wing roof. This stretch of water extended the full length of the viewing deck before flowing down to an intermediary pool on the auditorium roof and cascading to a ground level pool near the visitor center entrance. The water was kept in motion by a "piped circulation system." According to the specifications, after the completion of concrete work,

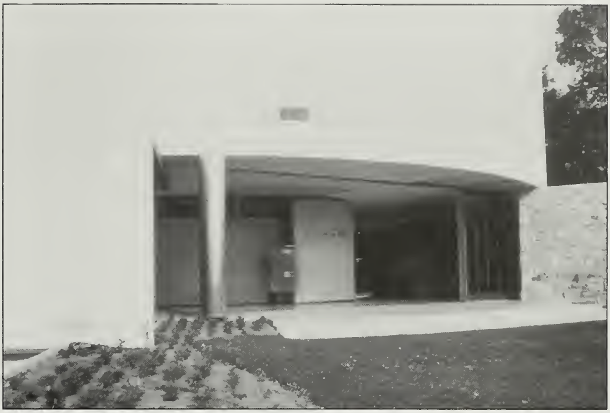


Figure 38. When the glass doors were opened, this section of the Cyclorama building's drum served as a stage complete with rostrum. The auditorium doors opened to provide indoor seating, and the lawn accommodated additional spectators. Courtesy Architectural Archives, University of Pennsylvania, Philadelphia.

a "waterfall diverter" was required in the intermediate pool to "reduce splash, impact, and noise to a minimum, as audited from the Projection Room."[85] Pouring the concrete for the pools was a relatively straightforward process, but waterproofing them proved more challenging. By June 1961, a special polysulphide caulking compound was required in the pool joints to prevent water from leaking into the office wing below.[86] A few months later, the park "noticed that the concrete slab, placed over the roofing to provide a surface for the view deck, had moved thereby sheering the deck drains, pulling the cove base away from its backing and presumably rupturing the waterproofing." Besides the pool repairs, the adjacent view deck required a quarry-tile walking surface.[87]

As the building neared completion, the consistency, size, shape, and pattern of stones in the rock walls continued to be a priority. Longstreth warned the mason to vary the top of the piers with larger, more horizontal stones. In a letter to Smith, he mentioned that larger, darker stones should appear at the bottom and suggested looking for proper stone at the top of the quarry. Superintendent Myers worried about the "dry-wall effect . . . which would cause excessive moisture entering joints." This problem could be avoided by packing the mortar more deeply and inspecting all areas while taking care not to create the "appearance of a tooled joint."[88] The work accomplished through the spring of 1961 was accompanied by an incessant aesthetic critique. In March, stonework was delayed while sub-contractors searched for additional dark-colored stone. The "triangular chinks" in pier T were removed and repaired. And the mason was reminded to "avoid repetitious shapes side by side." When the darker stone arrived at the site, supervisors complained about the thickness of the pieces. The joints were too wide and the stones at the bottom too small. By May 3, the south stone was eighty-five percent complete. In finishing up this important section, the mason was warned against creating a "quoining effect," in other words, suggesting a regular termination of the wall at the corner by using similar square stones. Finally in the fall of 1961, issues involving the stonework no longer related to the actual stones, but to the color of mortar joints and the painted ends of concrete piers.[89]

During the spring of 1961, the architects began preparation for the final stage of the concrete drum—the application of a liquid sealant called Thoroseal.[90] According to Dion Neutra and the product manufacturer, success depended on the effect achieved prior to the application of this final layer. Unfortunately, "the horizontal pour joints read clearly on the ribbed concrete areas between ribs especially on the Cyclorama drum, and rear wall of Auditorium and Mechanical. These must be ground flush afterpatching voids to correct for any possible variation in plane of one pour to the next. While the ribs will tend to overpower slight imperfections, there must be no 'ghost' of the horizontal 'bands' now quite dominant in the picture." Before applying Thoroseal, the firm recommended grinding six inches above and below the visible joints and performing "heavy sandblasting to effectively remove all traces of form oil down to clean concrete."[91] Finally, in May, a product representative of the Thoroseal company applied test samples of the product over certain construction joints to see if it would adequately mask surface deformities. According to Standard Dry Wall Products, the first coating of Thoroseal could be painted on, but a second coat required use of a plastering spray gun that blasted a mixture of Thoroseal and white silica sand.[92] While working with the samples, Gamble discovered "rough bulging patches" that required smoothing out, and recommended bush hammering. The rougher surface would provide a better bond for the Thoroseal.[93] During his next inspection, just a week before Richard Neutra was expected at the site, Longstreth found the surface unacceptable. He predicted that

> the expression of the construction joints wll telegraph through the final finish particularly because of the irregularities not in the surface between the ribs but of the ribs themselves which cast elongated shadows to accentuate their irregularities. These occur repeatedly at all construction joints and make a staccato shadow pattern at each joint around the drum. Unless the patching of the ribbing is perfect it is felt that this staccato pattern will show through final finish.[94]

Even after a September visit from the EODC to address problems with the application of Thoroseal, Superintendent Myers was still dissatisfied with the exterior finish. Visible shadows and other defects obviously compromised the effort to obtain a smooth concrete surface. Nevertheless, the Superintendent promised that if the contractors could apply another coat and achieve a surface similar to "the northern most of the 12-foot experimental panels," he would accept the job.[95] Project supervisor Smith personally observed the painting foreman, a subcontractor, apply three coatings of Thoroseal just north of the approved northern-most panel. In a follow-up report, Smith described unsightly build up and shadows in the new work.[96]

The Thoroseal problems appear to have been resolved by early December; when Neutra visited the site, he reported the job "favorable and engaging."[97] Most important to Neutra was the opportunity to test lighting conditions, particularly in the exhibit spaces, and color effects, both of which could only be properly evaluated on site. At this point, exhibit frames and dioramas were complete enough for paint analysis. Neutra's letter included a summary of qualities that "obviously put this building outside of the common run of projects," such as the audiovisual system, "the installation of the gigantic painting, the final testing of large dimensioned sliding and swinging doors, the perfection of the finish metal work, intended for long lasting sightliness without running upkeep, of roof viewing decks, etc."[98]

CHOOSING THE "COLOR PALETTE"

Although the structural details of the concrete forms and foundation were of utmost importance throughout construction, the choice of colors ultimately became the most debated aspect of the Gettysburg project. Nearly a year after the color controversy began, Dion Neutra explained to the Park Service that his father "spent years thinking about colors and their effect, and . . . consulted with some of the most advanced thinkers in the field, such as Francis Adler of Johns Hopkins, Baltimore."[99] The architects' original selection of a "palette" of colors for the building, introduced in July 1960, resulted in some significant interior changes. The designers considered the colors of all the interior spaces and facilities, from museum exhibits to restroom toilets. Fearing that the exhibit space would prove too dim, Neutra tried to highlight the displays through a careful selection of colors; in one case, he hoped to substitute the original garnet granite with opalescent ruby-ebony at considerable extra cost. The toilet stalls were to have light gray front doors, pilasters, and screens; the men's toilet would feature maroon cross walls and the women's terra cotta. For the lounge, the architects envisioned a warm char brown carpet, which would complement the rust terrazzo and contrast with lighter plastic covered furniture. The selecting of colors had only just begun.

As Dion Neutra indicated, the color choices involved more than simply tones and patterns that harmonized. Neutra and Alexander thought of color as an architectural element that influenced perception of the entire building mass. They layered closely related shades to create a receding effect in the office wing's west elevation, which also made it seem "to float." The white view deck rail stood out against elements closely related in tone. The hope was always "a subliminal effect," in other words, a sense of the place that visitors would not associate with architectural manipulation.[100]

The color dilemma intensified in November 1960, when John Cabot reported that his office found itself "in almost complete disagreement with the over-all color selections proposed."[101] The Park Service rejected both the brown-multi, a "dark and lifeless color," and the charcoal-multi, except in two sections of the museum where darker accents were useful. Black formica for toilet room shelves, the ticket booth, and the dioramas was impractical due to the propensity for fingerprints on these surfaces. Park designers particularly objected to artificial finishes, such as "the practice of painting wood and steel with aluminum paint, staining ash and fir with a walnut stain, and using wood-grained formica." In response to further selections made by the architects later that month, the Park Service decided to prepare its own color study.[102] Meanwhile, Neutra persuaded the client to accept a revised scheme he called "basically simple: a light warm gray-beige color as the basic element throughout the main level. As contrast in smaller areas, a good dark terrazzo on the stair and upper Lobby as contrast to the light floor on both levels."[103] With the pressure of deadlines mounting, understandable tension developed around the subject of colors. When Dion Neutra requested a site visit in December, John Cabot was quick to deny him the privilege, explaining that his associates were engaged in their own color analysis and would not discuss the subject until after its completion. He then admonished the firm for pressuring the government to make its color decisions and informing the contractor that the client was delaying progress. Cabot considered this both unprofessional and unfair, since the Park Service had waited many months for the architects' previous selections. Over the next few weeks, the architects talked with EODC designer Ann Massey and reached a suitable compromise in terms of "color harmony."[104]

During deliberations over colors for restroom facilities, Neutra and Alexander alluded to the reasoning behind their passionate defense of certain color combinations. Although the architects agreed that the restrooms should be visible from outside, they hoped to resolve the issue "without impairing the dignity and monumental quality of the building."[105] Drawing attention to the restrooms with brightly colored doors or large signs, as the Park Service suggested, would take away from the impression the architects hoped to create. Neutra illustrated this point by comparing the visitor center to "Independence Hall in your city, the Lincoln and Jefferson memorials in Washington, the Taj Mahal, or most any building of prominence," in which "especially accented toilet doors" would be most inappropriate.[106] The architects understood their building to "be in the same class as any of the above albeit of simple materials." Subtle elements set the building apart from utilitarian structures. The substitution of the blue west view deck railing with a more reserved Puritan gray, for example, furthered the visitor center's dignified demeanor. Neutra explained the firm's belief that blue would not only be a dangerous color to juxtapose with the blue sky, but might also impart a "too 'flippant' or 'playful' aspect to what should be a sober building at least in its main exterior effect."

Neutra voiced tentative approval for the color palette from his west coast office, but once on the site, he often changed his mind.[107] After a visit in May 1961, John Cabot reported the architect's "aversion" to the chosen mustard color and agreed to replace it with citron or lemon yellow.[108] By October, Alexander had met with Massey, Longstreth, and Smith to discuss interior finishes and determined that a new plain brown color should replace the chocolate tone. In the meantime, the EODC did not approve the change from white texture coat to beige multi for the curving south wall of the mechanical room and auditorium. Richard Neutra sent a telegram "regarding auditorium beige multi," insisting that, while he agreed with the park "in principle," the "high quality and maintenance freedom of glitter Thoroseal" was superior to an ordinary paint job and worth the extra trouble. He also suggested that the light gray Thoroseal originally contemplated in the specifications might harmonize more effectively with the interior color scheme. The color selection for office partitions also proved more difficult than anticipated. For the partition framework, the architects suggested beige for the metal bases, mustard for door frames, and metallic aluminum gray for end plates, tops, and mullions. The Park Service found this "an extremely busy pattern," and ordered everything in beige to match the rubber cove base.[109]

In a December 1 meeting, the contractor complained about the delays in reaching any color agreements, and by the next week he threatened to stop work if this aspect of the project remained unresolved. Longstreth pointed out that the architects could only recommend colors, not approve them. Although this was true, when it came to artistic issues, the architects operated on a different level from their Park Service collaborators. Seemingly insignificant details, such as "the play of color planes or values in the area of the corridors leading to the museum," took on great architectural importance. The architects' response to a discussion about the color of "Door #13," a minor component of the overall plan, warranted the following explanation:

> If you feel that a lighter color for the "frame" (everything on the door but the applied sash which is heavier brown) would not show on the inside anyway, we would appreciate it if we could be allowed to paint this to express the essential quality of this design and meet Mr. Neutra's idea of reduced brightness differential. We propose to treat the "structural" part of the door with Puritan Gray and the "applied sash" in Beaver Brown.[110]

As indicated by their work on the louver window wall, the architects were also concerned with the effect of natural and artificial light on the colors. They asked that contractors delay the final coat of paint until "after simulating the quality of light from the various types of lighting fixtures to be used in windowless areas."[111]

Finally, in early March, Don Benson and Ann Massey took color boards to Gettysburg and presented the completed scheme to Superintendent Myers.[112] As Cabot noted, the Park Service did not include aspects of the exterior—the view deck railing, concrete office wall on the west side, and eastern roof fascia—which still required consideration. Contract and Park Service architects reached agreement on the colors after what Cabot called "some five months of continuous review."[113] Despite this resolution, changes were still proposed as late as August 1961, when Dion Neutra reminded the Superintendent that "this business of getting the best final result does sometimes require a bit of readjusting of ones thinking from time to time. The building will be there a long time and we want to give it everything we've got for the final result."[114]

THE MUSEUM EXHIBITS, ROSTRUM, AND CYCLORAMA PAINTING

Although the museum exhibits were designed in San Francisco, Neutra and Alexander advised the Park Service in the construction of display cases and produced detailed elevations of the exhibits.[115] The architects informed Orndorff that "the government intends to supply factory built display cases consisting of ¾-inch plastic faced plywood sides, top and bottom, with aluminum trim to hold the glass and act as a covermould to conceal the shim space."[116] The contractors were only expected to provide the proper sized opening for the customized cases. After Neutra and Cabot visited the site in Spring 1960, the museums branch significantly altered its plans for the Gettysburg exhibits. New drawings showed that a three-panel unit designed to surround a column in the upper lobby was omitted and one of the panels retained for the south wall of the upper lobby. Two exhibits measuring 6 by 4 feet would be mounted across this wall, displaying "cyclorama history" and "other NPS Civil War Parks" respectively.[117]

While Park Service museum specialists focused on the dioramas and exhibit cases, the architects worked on what they considered "the prime element of the museum ... the play of the curved and contrasting planes behind the Rostrum."[118] In conjunction with the visually free-standing ramp cage and darker colors for displays, the rostrum backdrop was intended to achieve a "theatrical effect." The podium stood adjacent a bush-hammered wall with the words "shall not perish from the earth," in metal letters above a bust of Lincoln. This artistic arrangement alluded to the relationship between the rostrum and the President's famous speech. With the flick of a switch, the cylindrical museum was transformed into an auditorium, and the rostrum in front of the cyclorama ramp took the spotlight. Fabricated of solid aluminum, the rostrum was "buffed and polished to a mirror finish" to resemble stainless steel, the material and style featured in the "fence" on the rooftop, across the bridge, and in the cage around the cyclorama ramp. The stairs to the rostrum were hidden behind part of the inner ramp and, without any visible means of ascension, the rostrum appeared to hover above the lobby. Work on this aspect of the project had been delayed while Neutra searched for something more interesting than garnet or sable for the granite slab on one side of the rostrum. For a few hundred dollars extra, the architects could get opalescent ruby-ebony, a choice they much preferred.[119] The architects also considered the lighting of the museum and the painting part of the cyclorama drama. To heighten the sense of mystery and anticipation, lights were not turned on until the people were completely off the ramp.[120]

While contract and Park Service architects designed and built their concrete container for the cyclorama, Walter Nitkiewicz was busy with a two-and-a-half year restoration of the historic painting. Since his appointment as the Division of Museum Service's preservation specialist in 1952, Nitkiewicz had primarily focused on the restoration of easel paintings, including two Thomas Moran views of Yellowstone and Grand Canyon in the Secretary of the Interior's conference room. The cyclorama project would not only require unique solutions to restoration issues, but the assistance of four employees and Henri G. Courtais, a consultant "conservation engineer." The magnitude of the effort is described by then chief of the Park Service's Museum Branch, Ralph H. Lewis.

> Nitkiewicz and his crew began by facing the entire painting with squares of Japanese tissue paper to hold in place any paint that might come loose. The unusual facing technique required adaptation to counteract tensions in the weakened canvas. Using a transit, they established a level line around the complete circle of painted scene that would prove vital during reinstallation. Next they cut the painting into vertical strips narrow enough to fit on the twenty-foot-wide relining table. Lowering each strip in turn face down onto the padded table, they flattened the stiff, friable canvas by painstaking application of

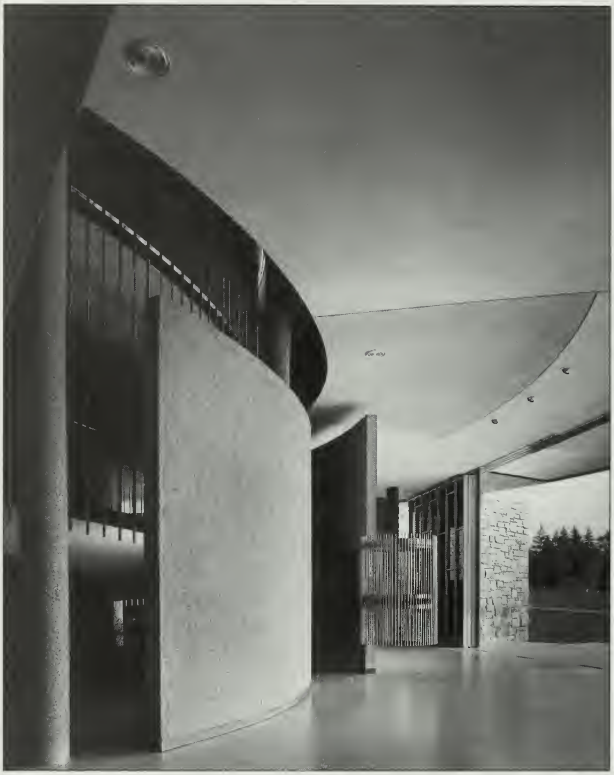


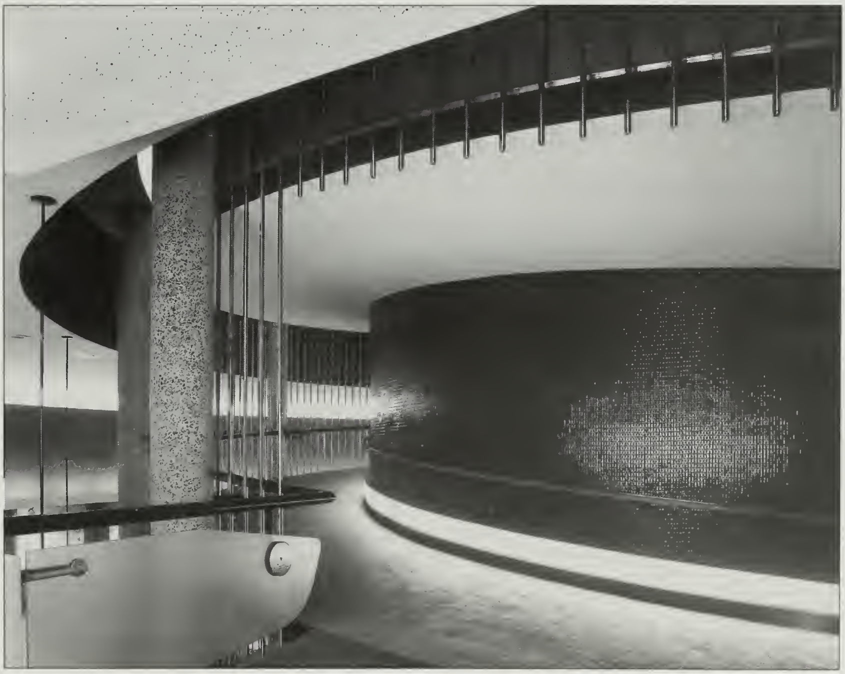
Figure 39. The "play of the curved and contrasting planes behind the rostrum" with a view of the landscape through the open doors, 1962. Photo by Lawrence S. Williams, Inc.

> controlled heat and moisture working from the center outward. Infusion of gelatin size enabled them to limit penetration of the relining adhesive. Patching breaks, replacing old repairs, and removing former reinforcements followed. Stretching the linen relining canvas called for precise teamwork by all hands as well as the use of innovative devices. After relining they turned the strip face up, removed the facing paper, and cleaned the painted surface with gauze wads and a mixture of carefully chosen solvents, wiping away the dirt from 10,000 square feet of surface without loss or damage to the paint. The final stage of mounting the strips in the new building and rejoining the cut edges along the natural curvature the hanging canvas assumed proved most difficult of all.[121]

The cyclorama restoration was undertaken by an expert conservator using state of the art knowledge of the preservation process. However, as Nitkiewicz revealed in a paper describing his experience, the curators had no choice but to cut the painting into twenty-five sections, remove four feet of the "sky extension canvas," and otherwise alter the painting during the installation, both to compensate for the loss of convexity and to repair extensive damage.[122]

A revised museum plan was approved by the architects and museum branch in September and work began on designing a maintenance scaffolding. The park rejected the example drafted by the contractor as too expensive and drew up its own plans pending the architects' approval. After Nitkiewicz finished relining the painting, park architects turned their attention to drawings for the suspension ring, which would need to fit a canvas measuring 352 feet 10 ½ inches at the top and 358 feet 9 inches at the base.[123] Supervisor David Smith's plan for the "supporting ring" of the painting was approved by Ralph Lewis, who personally visited the site in late December 1960.[124] All but the last twenty feet of the painting's scaffolding and catwalk had been installed by late February 1961. The Park Service and architectural firm worked together on problems relating to the installation when it was discovered that a rail supporting the painting was visible below the "valance lath." A change order issued in March allowed for nailing blocks behind the valance to help cover the support structure. Installation was further

Figure 40. A view up the cyclorama ramp showing the surrounding metal cage and the metal bridge in the foreground, 1962. Photo by Lawrence S. Williams, Inc.



delayed by complications in building the acoustical ceiling.[125] Finally, in preparation for the actual hanging of the canvas, Nitkiewicz requested the dustproofing of the museum space. Nitkiewicz finished hanging the painting in May 1962.

THE VISITOR CENTER LANDSCAPE

The plan for the landscape surrounding the visitor center began with the site's preexisting conditions. During the stone panel construction, Superintendent Myers became anxious about the park's loss of historic stone walls, one of which was near the new building. Acting Chief John Cabot agreed that the wall should remain and sent a telegram to the architects demanding its preservation. In an additional note to Smith, Cabot stated that "replacement of wall after grading should be accomplished as Mr. Myers requests in such a manner as to preserve the rural farm scene in the vicinity of the new building. Too many walls have already been lost in this area."[126] The Park Service considered historical relics, like the stone wall, valuable elements of the battlefield. A September 1960 shop drawing by the architects indicates that the "historic stone fence" is to "rise out" of the flagstone patio.

In June, Robert A. Hope announced the opening of bids for the grading and walks surrounding the building. The contract was awarded to E. D. Plummer Sons of Chambersburg, Pennsylvania, which planned to subcontract the masonry aspect of the project to Orndorff Construction.[127] Most of the walks were of flagstone cut into irregular pieces on site and fitted into prepared forms and designated patio areas. When the grading and paths were completed five months later, contractors were busy landscaping the entrance road and parking area.[128] Hope announced the arrival of twenty-three red oaks from Frederick Mummert's Colonial Nursery in Harrisburg. The final inspection of the landscaping work took place in November 1960, and during a follow-up visit to the site the next June, Mummert reported good growth with the exception of two trees that required replacement.

Considering their comprehensive approach to architectural design, it's not surprising that Neutra and Alexander also participated in planning the building's immediate surroundings. Early shop drawings indicate the heights of plants along the exterior ramp, ranging from low perennials at the entrance to 5-foot plantings at the far end; the desired sizes of flagstone in the walks were also designated. In March 1961, Neutra talked with Cabot and Park Service landscape architect Eugene DeSilets about the need to screen the north piers and visually extend the south end of the office wing. This discussion became more substantial in December, when Neutra mentioned the "possibility of extending 5-foot high planting at south end Office building extending southward to opposite last tree to carry out line of Office Building and tie it in with the landscape." In a letter to DeSilets, Neutra commented on "the evergreen screening-out of the un-natural neighboring museum and the extension of the visual length of the office."[129] The architects believed that landscape features would not only contribute to the overall setting, but also enhance specific aspects of the building's form and increase its visual impact.

COMPLETING THE VISITOR CENTER

Over a year after the original building completion date, the Orndorff Construction Company submitted an official request for additional reimbursement. Back in February 1961, Orndorff had privately spoken of his financial problems during a dinner engagement with Dion Neutra. When the architect informed the Park Service of this matter, Cabot suggested that the contractors file an official claim. Over the summer, Cabot remarked that "claims of this type are one of the hazards often experienced with the acceptance of low bidders."[130] David Smith, the Park Service's project supervisor, had experienced such hazards firsthand, and in a thirty-five-page response to the contractors described his constant struggle to maintain high construction standards.[131] Despite potential losses, the architects were most concerned with the fate of the building, declaring that "If it must cost extra to get the job we must have, let's pay it—but let's not accept inferior results to what is specified because of this problem."[132] Later that month, Orndorff issued a list of specific complaints against the architects, which included criticism of their dealings with the subcontractors and the three revisions in the painting schedule.[133] If relations were strained, the matter was resolved enough not to effect progress on the site. Dion Neutra wistfully recalled the original atmosphere surrounding the project, when everyone "had such high hopes for a wonderful spirit throughout . . ."[134]

Even though the building remained under construction, by January 1961, Park Service employees had begun preparation for moving into their new offices. Superintendent Myers ordered new furniture to replace the current items, all of which were the property of the U.S. Postal Service except for one metal file cabinet.[135] He also ordered additional furniture to accommodate special visitors during the Civil War Centennial Year (1961-1965). The superintendent's anticipated guests included the former President, representatives of foreign governments, members of Congress, and state and local officials.[136] Myers had been waiting to move into his new building since Spring, but by September the situation didn't look promising. Over a year before, based on his knowledge of the completion date, Myers had given the Lincoln Fellowship of

Pennsylvania permission to hold its annual observance of the Gettysburg Address in the new visitor center, and U. S. Senator Everett Dirksen was engaged as the keynote speaker.

Regardless of the superintendent's awkward position, construction work remained to be done by all parties involved. The EODC and the contract architects worked together on the planters, furnishings, and exhibits. Neutra admired the "rendering of the textures," in the Park Service museum planter sketches, but suggested a reduction in the height of "the fence." In his opinion, the cannon in the exhibit would be best displayed lying on its side.[137] The architects also suggested the rotation of the second-floor lobby furnishing plan ninety degrees clockwise so that visitors could "walk up to the rail and look down to the lower lobby and get a better view of the curved wall going out to the pool." They felt that "placing most people's back to this side of the lobby seems like underplaying the most important feature."[138]

The final inspection of the building was originally scheduled for December 18, but put off for another month; it was finally arranged for January 8-10. In conjunction with the inspection, the architects met for private talks with the Park Service to discuss the contractor's claim. The original inspection assumed the replacement of aluminum work on the west entrance of the building, and an approved Thoroseal application on the exterior concrete.[139] During the summer before the official dedication ceremony, the visitor center was featured in the *Philadelphia Inquirer* and *The New York Times*, which announced "Gettysburg's Gain" with a photograph of the battlefield from the viewing deck. The *Times* emphasized the increased visitor contact and visitor opportunities provided by the new facility, noting that "the completion of this development augurs well for tourists whose previous battlefield tours have ended in merely the recollection of a meaningless potpourri of monuments and statues." For the first time, visitors might gain a "clearer, more gripping picture of the historic clash," in a building "imaginatively planned to accommodate efficiently not only present crowds but much bigger ones."[140]

When the building was dedicated on November 19, 1962, the 99th anniversary of the Gettysburg Address, Wirth delivered his remarks from the rostrum. For Wirth, the Gettysburg Visitor Center represented the best of contemporary architecture and planning, not to mention the success of his Mission 66 improvement effort. Neutra surpassed even Wirth in idealism when he designed the rostrum, where he envisioned humanitarians from around the world emulating Lincoln with speeches in support of global unity.[141] The doors slid open to face a clearing where 30,000 spectators could gather on the lawn, overlooking the site of Pickett's famous charge. Wirth's speech celebrated "a great day in the history of the Gettysburg National Military Park and of the

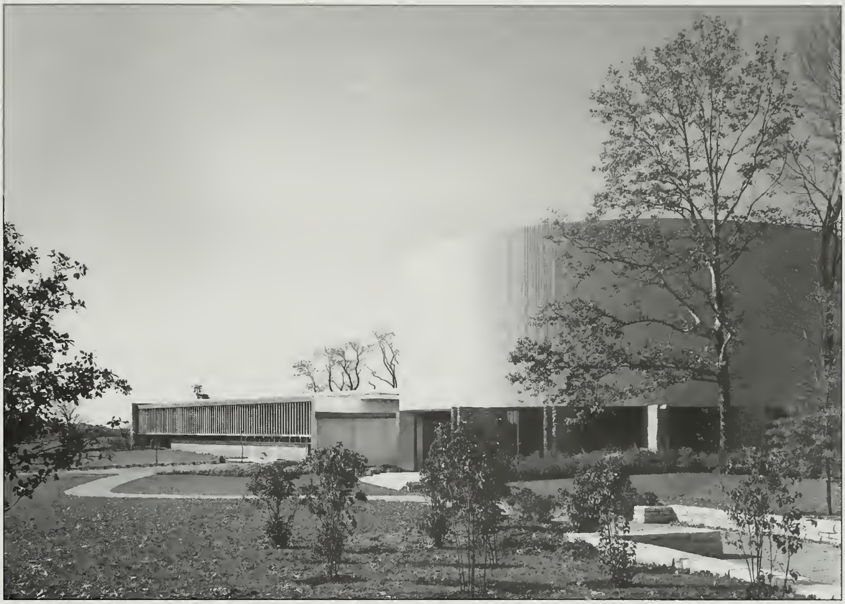


Figure 41. Gettysburg Cyclorama and Visitor Center, ca. 1963. Photo by Jack E. Boucher. Courtesy National Park Service Technical Information Center, Denver Service Center.

City of Gettysburg." He concluded with a reminder that "our great task lies in preserving all physical remains and in giving added life and meaning to these remains. Our Visitor Center is a great step forward in this latter direction."[142]

The Building Since 1962

During preparation for the visitor center's final inspection, Dion Neutra wrote about the inevitable changes that occurred in every building over time. He hoped the designers might "limit the pasting on of hand lettered signs and instructions or do-it-your-self augmentations" of things the architects had forgotten, and asked Benson if he had "ever walked into a building a year later and been amazed at the veritable 'growth' of things which appear to have 'sprouted' since final inspection."[143] Since its day or two of pristine existence, when museum-like photographs were taken, the cyclorama has acquired a considerable number of shoots but not undergone any major transformations.

Two years after the grand opening, the entrance lobby was remodeled to more closely resemble a typical Mission 66 plan. Visitors now faced the information desk immediately upon entering the building. The original information desk had stood to the left of the entrance, and this space became the new sales area. At an unknown date, a ticket table was installed at the bottom of the ramp leading up to the cyclorama. Originally, visitors purchased tickets from a window in the wall of the building's cylindrical core. The motorized doors in the rotunda and auditorium do not operate and apparently never functioned properly due to settling of the foundation. As a consequence, the rostrum can hardly function as a speaker's platform. The roof terrace pools are without water, and although a few visitors wander up the ramp to the viewing terrace, the sound of running water no longer draws attention to this feature. The lower pool was removed as well.

Reroofing of the facility began as early as 1967 and remains an issue of serious concern. In the early 1980s, carpet was replaced in some areas of the building and added to the visitor information lobby and lower level hallway leading to the museum in an effort to mask deteriorating terrazzo tile. Significant cracks can be seen in the terrazzo throughout the lobby. More recently, the staff reported shifting of the building, possibly a result of "blasting in the quarry south of town."[144] By this time, the facility management specialist regularly monitored the building. Water leaks in the 1990s caused visible staining, sagging, flaking of ceiling plaster, and even damage to the surface of the cyclorama painting.[145]

If the building remains relatively unchanged since the early 1960s, its surroundings have not been so fortunate. In 1971, *U.S. News and World Report* described the "fast-growing strips of motels, filling stations, quick-order restaurants, commercial museums and souvenir stands" surrounding the battlefield.[146] The story focused on the controversy over construction of a 307-foot-high observation tower adjacent the National Cemetery. Visitor facilities also became more elaborate with the park's acquisition of the Rosensteel Museum, complete with its electric map and the country's largest collection of Gettysburg artifacts. When the museum was opened as the new visitor center two years later, the original facility became known as the Cyclorama Building. During the tower controversy, the *AIA Journal* mentioned the Mission 66 visitor center in an article praising the Park Service for its fine architectural work. The Cyclorama was singled out for placing "the visitor in the darkened center of the battlefield."[147]

The planning for a visitor center at Gettysburg began before World War II and, during the 1950s, the Park Service determined the site and programmatic elements of the design. After hiring an internationally known architectural firm for the commission, the Park Service worked closely with its chosen designers, producing a building that was ultimately a collaborative effort. The Gettysburg Visitor Center and Cyclorama was intended as a showpiece for the Park Service, which hoped to highlight its Civil War sites in time for their one-hundredth anniversary.[148] Upon its dedication, the building was heralded as a great achievement, both in terms of the building program and the visitor center's contribution to site interpretation. The building was welcomed by the public and helped inspire a campaign to "save Gettysburg" from "beer parlors, souvenir stands, service stations, and drive-ins."[149] Today, the Park Service continues to battle such intrusions. The Visitor Center and Cyclorama building was declared eligible for listing in the National Register of Historic Places on September 24, 1998.

The Gettysburg Visitor Center and Cyclorama is historically valuable, not merely as an example of modern architecture in a national park, but as a significant example of an original Mission 66 visitor center. It represents the collaboration of a world-famous architectural firm and the National Park Service at one of the nation's most important historic sites. From beginning to end, it was risky to design a new type of building in a location loaded with cultural significance; to use materials both modern and rich; and to privilege the visitor with a dramatic trip into the cyclorama. As one *Washington Post* architectural critic proclaimed, the Park Service had dared to build a "fearlessly modern" building that was "quietly monumental but entirely unsentimental," and "a manifestation of 'cultural effectiveness.'"[150] Visitors can still glimpse the idealism that impressed critics in the 1960s, propelled the modern movement, and inspired the Mission 66 program. Like the painting it shelters, the Visitor Center and Cyclorama is an artifact of another era.

ENDNOTES

[1] Richard J. Neutra, *Life and Shape* (New York: Van Rees Press, 1962), 313.

[2] A cyclorama of the Siege of Paris created by Henri Philippoteaux, father of Paul, included objects in the foreground. See entry on "panorama," *Encyclopedia Britannica*, vol. 17 (Encyclopedia Britannica, Inc., 1973). This entry is illustrated by a photograph of the Gettysburg Cyclorama.

[3] The painting has suffered extensive damage over the years. It originally measured approximately 400 by 50 feet. See "The Gettysburg Cyclorama," National Park Service brochure; park archives photos, #3c-3033, #3c-3042.

[4] If not technically associated with the park, the guides were required to pass a licensing examination and to wear an official uniform.

[5] Harlan Unrau, "Administrative History, Gettysburg" (United States Department of the Interior, National Park Service, July 1991), 199.

[6] Roy E. Appleman to Acting Regional Director, September 28, 1942, as quoted in Unrau, "Administrative History," 225.

[7] Superintendent Coleman to Regional Director, Region One, February 19, 1945, as quoted in Unrau, "Administrative History."

[8] Unrau, "Administrative History."

[9] "Cyclorama-Museum-Adm. Bldg." drawing #NMP-GET 2040, September 1945; #2041, September 1945; #2042, 1945; #2043, November 16, 1945; #1130, December 14, 1945; microfiche, Technical Information Center (TIC), Denver Service Center (DSC).

[10] This project took place in 1947-1948. Panzironi's work included applying horizontal sections of cloth to the back of the canvas, a technique that may have influenced later restoration. See Unrau, "Administrative History," 247.

[11] Arthur E. Demaray to Pickett, August 4, 1948, Washington Office (WASO) archives, as quoted in Unrau, "Administrative History," 247.

[12] Edward S. Zimmer to Superintendent, memorandum, "Reconnaissance of Visitor Center Location and to Observe Road Construction Projects, Gettysburg National Military Park," October 4, 1956, Box 32, EODC records, Regional National Archives (RNA), Philadelphia.

[13] "Visitors Center, Cemetery Ridge, South of Zieglers Grove, Eastern Office of Design and Construction," drawing #3012, February 13, 1957. The drawing is signed by John Cabot.

[14] "Mission 66 for Gettysburg National Military Park" (Washington, D. C.: National Park Service, ca. 1957), 2. National Park Service History Collection, Harpers Ferry Center.

[15] Hines, *Richard Neutra*, 65.

[16] Hines, *Richard Neutra*, 89.

[17] John Peter called the Experimental School "one of the most influential school buildings in the United States." See Peter, *Masters of Modern Architecture* (New York: Bonanza Books, 1958), 205.

[18] Hines, *Richard Neutra*, 224.

[19] Richard Neutra to Thomas J. Allen, regional director, January 25, 1963, "Rough Draft."

[20] "West Coast Architects I, Richard J. Neutra," *Arts and Architecture* 81 (March 1964): 14-18, 34. The article includes a photograph of the "Lincoln Memorial, Gettysburg Visitors Center, 1963."

[21] Richard Neutra, *Life and Shape*, 311.

[22] Richard Neutra, *Survival Through Design* (New York: Oxford University Press, 1954).

[23] Ziegler's Tower was removed by the Park Service July 19, 1961.

[24] This set of drawings was signed by Conrad Wirth, January 22, 1959.

[25] Dion Neutra, "Gettysburg Revisited: Memories of an Architect Son," *AIArchitect* (April 1998), 20.

[26] See Eugene R. DeSilets, acting chief to James B. Myers, superintendent, December 1, 1959, Orndorff #2, Box 2, folder 7, park archives, Gettysburg. Neutra and Alexander produced at least four pastel or watercolor renderings of the visitor center in 1959, including two labeled "view from the east" and one entitled "Gettysburg Visitor Center and Lincoln Memorial Group." See TIC, photo archives.

[27] Brickley S. Orndorff to Dion Neutra, December 10, 1959, Orndorff #2, Box 2, folder 7, park archives, Gettysburg.

[28] "Master Plan for the Preservation and Use of Gettysburg National Military Park," Mission 66 Edition (National Park Service, August 1960), 1. TIC, DSC.

[29] "Master Plan, Vol. 1, Chapter 2, Visitor Use Brief," February 1962, 4.

[30] In early August 1960, the Orndorff Company realized that its estimator had made a mistake in computing the overall square footage of the project; the bid was based on a total square footage of 1,910, not the actual 19,116. As a result, the company bid much lower than was realistic. See James B. Myers to Joseph Campbell, Comptroller General of the United States, November 28, 1961, Orndorff #25, Box 4, folder 11.

[31] "Director's Squad," October 1, 1959, Box 6, EODC general correspondence, RNA; "Directors Staff Meeting," minutes, August 27, 1959, Box 6, RNA.

[32] Along with Orndorff, the other contractors were Hirsch, Arkin, Pineherst, Inc., plumbers from Philadelphia; Yorkaire Cooling and Ventilating Company of York, Pennsylvania; and Keystone Engineering Corporation of Philadelphia, responsible for architectural metal and electrical work. David O. Smith, project supervisor, to Neutra and

Alexander, November 27, 1959, Orndorff #1, Box 2, folder 5. According to Thomas Vint, the low bids totaled $893,915, "well within the money available." The Park Service received forty-one bids, about ten for each contract. See "Director's Squad," October 1, 1959, EODC General Correspondence, Box 6, RNA.

[33] Dion Neutra to Orndorff, December 4, 1959, Orndorff #2, Box 2, folder 2.

[34] "Gettysburg Visitor Center—Cyclorama," Robert J. Stickel to Dion Neutra, January 8, 1960. Orndorff #3, Box 1, folder 1.

[35] Brickley S. Orndorff to James B. Myers, January 6, 1960, Orndorff #3, Box 1, folder 8.

[36] Dion Neutra to Brickley S. Orndorff, December 4, 1959, Orndorff #2, Box 2, folder 7.

[37] Contract between the EODC and Neutra and Alexander, "Change Order no. 1," October 20, 1959.

[38] Richard Neutra began training his second son (b. 1926) for a career in architecture during his youth. Dion graduated from the architectural school of the University of Southern California and spent a year studying in Switzerland before joining his father's firm. After 1955, Dion worked from the office on Glendale Boulevard headed by Robert Alexander. He remained with Alexander after the dissolution of the partnership. See Hines, *Richard Neutra*, 293-4.

[39] "Gettysburg Visitor Center and Cyclorama," November 20, 1959, Orndorff #1, Box 2, folder 5.

[40] Neutra and Alexander, "Specifications." Under the heading "general joint pattern and workmanship," the architects provided the following description: "The general effect shall be to emphasize horizontal joints rather than a rubble wall effect. The stone shall be laid . . . in courses on their natural beds breaking vertical joints by at least 6". Some chipping, tooling and shaping will be required to produce the effect desired. No triangular pieces shall be used, include no uninterrupted horizontal joints over 6' to 8' in length. These joints shall not continue at the same level after being broken. About 20% of the stones may be as high as 12" to 18" to allow for variety and these shall be spaced in a random pattern throughout the wall. The rest of the stones shall range from 2" to 10" in height with about 50% falling in the 4" to 8" range. Stones shall rest on at least three points upon the underlying course. Variation in plane on the front face shall not exceed 2" maximum. Joints shall generally be between 1/2" and 1" and shall be tooled flush and tight and then immediately sacked to remove the tooled appearance. Joints shall present an informal appearance. Where stone is installed against concrete backing, the space between stone and concrete shall be completely filled with fluid mortar, puddled into place."

[41] Dion Neutra to Orndorff Construction, January 19, 1960, Orndorff #3, Box 1, folder 8.

[42] "Record of Supervision Visits," Thaddeus Longstreth, April 1, 1960.

[43] "Record of Supervision Visits," Longstreth, March 31, 1960.

[44] Dion Neutra to Mr. Bordner, Orndorff Construction, March 4, 1960, Orndorff #5, Box 2, folder 10. By March the panel had still not been completed.

[45] Neutra and Alexander to Orndorff Construction, Christmas Eve, 1959, Orndorff #2, Box 2, folder 6.

[46] Dion Neutra to John J. Bordner, Orndorff, April 15, 1960, Orndorff #6, Box 3, folder 2.

[47] Dion Neutra to John B. Cabot, April 15, 1960. A year later, when the building was still very much under construction, Senator Hugh Scott complained that purchasing Japanese tile violated the effort to buy American. During this discussion, it was noted that the linen used for backing on the cyclorama painting was imported from Belgium. In both cases, the desired products were not available in the United States. See Gettysburg National Military Park Association, minutes, June 1, 1961, park archives.

[48] David O. Smith to Thaddeus Longstreth, March 3, 1960, Orndorff #5, Box 3, folder 1.

[49] The UNESCO building, the headquarters for the United Nations in Paris, was designed by an international team of architects including Marcel Breuer, Pier Luigi Nervi, and Bernard Zehrfuss in 1958. The eight-story building featured a curved facade with tapered concrete columns that required considerable form work.

[50] Dion Neutra to Bordner, Orndorff Construction, March 4, 1960, Orndorff #5, Box 3, folder 1.

[51] Dion Neutra to Orndorff Construction Company, March 18, 1960, Orndorff #5, Box 3, folder 1.

[52] Dion Neutra to David O. Smith, March 25, 1960, Orndorff #5, Box 2, folder 10.

[53] David O. Smith to Neutra & Alexander, April 8, 1960, Orndorff #6, Box 3, folder 2; "Record of Supervision Visits," Longstreth, April 7, 1960.

[54] Dion Neutra to David O. Smith, April 12, 1960, Orndorff #6, Box 3, folder 2.

[55] David O. Smith to Neutra and Alexander, April 20, 1960, Orndorff #6, Box 3, folder 2.

[56] "Record of Supervision Visits," Longstreth, April 28, 1960.

[57] "PA & B Profile: Richard J. Neutra," *Pacific Architect and Builder* (May 1960).

[58] "Record of Supervision Visits," Longstreth, April 20, 1960.

[59] "Record of Supervision Visits," Longstreth, April 20, 1960, and May 12, 13, 1960.

[60] "Record of Supervision Visits," Longstreth, June 21, 1960.

[61] "Record of Supervision Visits," Longstreth, June 23, 1960.

[62] "Record of Supervision Visits," Longstreth, November 4, 1960.

[63] "Record of Supervision Visits," Longstreth, November 4 & 9, 1960.

[64] Cabot wrote, "I am entirely confident that, if the stonework is pleasing to you, it will be more than satisfactory to me." Cabot to Longstreth, November 9, 1960, Orndorff #13, Box 3, folder 9.

[65] Neutra and Alexander to Bordner, October 6, 1960, Orndorff #12, Box 3, folder 8.

[66] John J. Bordner to Neutra and Alexander, November 2, 1960, Orndorff #13, Box 3, folder 9.

[67] Dion Neutra to David Smith, November 7, 1960, Orndorff #13, Box 3, folder 9.

[68] Cabot to Bordner, December 6, 1960, Orndorff #14, Box 3, folder 10.

[69] Bordner to Neutra and Alexander, November 30, 1960, Orndorff #13, Box 3, folder 9.

[70] David O. Smith to Neutra and Alexander, November 10, 1960, Orndorff #13, Box 3, folder 9.

[71] David O. Smith to Richard J. Neutra, December 27, 1960, Orndorff #14, Box 3, folder 10.

[72] "Cable Roof Structures," Bethlehem Steel brochure, October 1963.

[73] Smith to Myers, August 24, 1961, Orndorff #22, Box 4, folder 8.

[74] Glen Philpot, Supervision Report, December 5 & 6, 1960, Orndorff #14, Box 3, folder 10.

[76] Change Order no. 8, March 9, 1961, Change Orders/General 1960-1962, Box 1, folder 3.

[77] Dion Neutra to Cabot, January 25, 1961, Orndorff #15, Box 4, folder 1.

[78] The Kaufmann Residence (1948) in Palm Springs, California, and Alexander's Orange Coast College (1946) in Costa Mesa were also featured in the book. See John Peter, *Aluminum in Modern Architecture*, vol. 1 (Louisville, Kentucky: Reynolds Metals Company, 1956).

[79] Hines, *Richard Neutra*, 241, 245.

[80] Dion Neutra to Lee Miller, Lemlar Manufacturing Company, August 16, 1960, Orndorff #10, Box 3, folder 6.

[81] Cabot to Neutra, September 1, 1960, Orndorff #11, Box 3, folder 7; see also Change Order no. 6, November 28, 1960; Change Orders/General 1960-1962, Box 1, folder 3.

[82] Neutra and Alexander to Orndorff, August 12, 1960. Orndorff #10, Box 3, folder 6.

[83] David O. Smith to Orndorff, April 13, 1961, Orndorff #18, Box 4, folder 4.

[84] "Record of Supervision Visits," Longstreth, August 4, 1961. The doors were not actually shipped from Los Angeles until August 17.

[85] Neutra and Alexander, Specifications, C-6.

[86] Change Order, June 27, 1961.

[87] Change Order #19, September 18, 1961.

[88] "Record of Supervision Visits," Longstreth, November 21, 1960.

[89] "Record of Supervision Visits," Longstreth, February 27, March 7, March 15, and April 11, 1961.

[90] Richard Neutra made a personal call to the president of Standard Dry Wall Products Inc., S. C. Begg, to emphasize the importance of the work, suggest consultation with a chemist if necessary, and inform the company of an opportunity for "excellent advertising on a national scale." Memorandum, April 1, 1960, Orndorff #6, Box 3, folder 2.

[91] Dion Neutra to Cabot, February 22, 1961, Orndorff #16, Box 4, folder 2.

[92] The construction company complained about delays during a lengthy attempt to locate the special plaster gun required to properly apply Thoroseal; it was finally ordered from Van Nuys, California, at considerable expense. Orndorff to James B. Myers, September 13, 1961, Orndorff #23, Box 4, folder 9.

[93] "Record of Supervision Visits," Longstreth, May 10, 1961.

[94] "Record of Supervision Visits," Longstreth, May 16, 1961.

[95] Superintendent Myers to Orndorff, November 2, 1961, Orndorff #25, Box 4, folder 11.

[96] Smith to Myers, "Special Report on Thoroseal," November 17, 1961, Orndorff #25, Box 4, folder 11.

[97] The Gettysburg Visitor Center was featured in an advertisement for Thoroseal during the 1970s with the headline "16 year old surface looks great! ... and still will 16 years from now."

[98] Neutra to Robert Smith, chief EODC, December 7, 1961, Orndorff #26, Box 4, folder 12.

[99] Dion Neutra to Cabot, January 24, 1961, Orndorff #15, Box 4, folder 1.

[100] Neutra and Alexander to Cabot, November 16, 1960, Orndorff #13, Box 3, folder 9.

[101] John B. Cabot to David O. Smith, November 9, 1960, Orndorff #13, Box 3, folder 9.

[102] Donald S. Nutt, acting supervising architect, to Neutra and Alexander, November 28, 1960, Orndorff #13, Box 3, folder 9.

[103] Dion Neutra to Cabot, December 8, 1960, Orndorff #14, Box 3, folder 10.

[104] Dion Neutra to Nutt, January 24, 1961, Orndorff #15, Box 4, folder 1.

[105] The architects were responding to a letter of January 4, 1961, from Donald Nutt, acting supervising architect. Nutt wrote, "it is most important that the principal entrance to the toilet rooms be from the exterior, as the interior corridor leading to these rooms is not large enough to successfully handle entrance and exit crowds."

[106] Dion Neutra to Nutt, January 24, 1961, Orndorff #26, Box 4.

[107] Neutra also made several visits to the site for which he did not charge the government.

[108] John B. Cabot to Dion Neutra, May 10, 1961, Orndorff #19, Box 4, folder 5.

[109] Cabot to Neutra and Alexander, May 5, 1961, Orndorff #19, Box 4, folder 5.

[110] Dion Neutra to Nutt, January 24, 1961, Orndorff #26, Box 4.

[111] "Record of Supervision Visits," Longstreth, December 8, 1960.

[112] Cabot to Neutra, March 6, 1961, Orndorff #17, Box 4, folder 3.

[113] Cabot to Myers, March 6, 1961, Orndorff #17, Box 4, folder 3.

[114] Dion Neutra to Myers, August 4, 1961, Orndorff #22, Box 4, folder 8.

[115] Drawings of "rostrum museum details" dated September 11, 1959, were revised in June, 1960. See TIC, DSC.

[116] Neutra and Alexander to Orndorff, December 14, 1960, Orndorff #14, Box 3, folder 10.

[117] Donald S. Nutt, acting supervising architect EODC, to Neutra, April 26, 1960, Orndorff #6, Box 3, folder 2.

[118] Dion Neutra to John Cabot, November 16, 1960, Orndorff #13, Box 3, folder 9.

[119] "Record of Supervision Visits," August 12, 1960, Orndorff #10, Box 3, folder 6.

[120] "Record of Supervision Visits," Longstreth, ca. April 4, 1960 (visit #57).

[121] Lewis, *Museum Curatorship*, 349-50.

[122] Walter J. Nitkiewicz, "Treatment of the Gettysburg Cyclorama," *Studies in Conservation* 10, no. 3 (August 1965): 91-118.

[123] Nitkiewicz to David Smith, November 4, 1960, Orndorff #13, Box 3, folder 9.

[124] Donald F. Benson, acting supervising architect EODC, to Project Supervisor David O. Smith, December 23, 1960, Orndorff #14, Box 3, folder 10.

[125] June 22, 1961, Orndorff #20, Box 4, folder 6.

[126] John Cabot to Neutra and Alexander, teletype, June 9, 1960, Orndorff #8, Box 3, folder 4.

[127] Eugene DeSilets to Neutra, June 19, 1961, Orndorff #20, Box 4, folder 6.

[128] Robert A. Hope to Chief, EODC, November 4, 1960, Orndorff #13, Box 3, folder 9.

[129] Dion Neutra to Eugene DeSilets, December 20, 1961, Orndorff #26, Box 4, folder 12.

[130] Cabot to Alexander, July 3, 1961, Orndorff #21, Box 4, folder 7.

[131] David Smith to Chief, EODC, "Report on Orndorff's Claim dated June 12, 1962," July 10, 1961, Thaddeus Longstreth Collection, Architectural Archives, University of Pennsylvania.

[132] Dion Neutra to Smith, July 12, 1961, Orndorff #21, Box 4, folder 7.

[133] Orndorff to Myers, July 20, 1961, Orndorff #21, Box 4, folder 7.

[134] Dion Neutra to Myers, August 4, 1961, Orndorff #21, Box 4, folder 8.

[135] Myers to Regional Director (Ronald F. Lee), January 10, 1961, Orndorff #15, Box 4, folder 1.

[136] Ronald F. Lee, "Certification to Support Purchase Order Issued by Region Five Office for Furniture for Gettysburg National Military Park," draft, May 4, 1961, Orndorff #15, Box 4, folder 1.

[137] Dion Neutra to Eugene DeSilets, December 20, 1961, Orndorff #26, Box 4, folder 12.

[138] Myers to Donald Benson, EODC, December 22, 1961, Orndorff #26, Box 4, folder 12.

[139] Myers to Orndorff, December 13, 1961, Orndorff #26, Box 4, folder 12.

[140] "The Philippoteaux Cyclorama, a Huge and Famous Old Painting, Now Has a New Home at Gettysburg," *Philadelphia Inquirer* (July 1, 1962); Dorothy B. Huyck, "Gettysburg's Gain, New $1 Million Visitor Center to Give Tourists Clearer Picture of Battle," *The New York Times* (May 6, 1962).

[141] Richard Neutra, *Life and Shape*, 311-312.

[142] Wirth also announced that Secretary of the Interior Stewart Udall shared "the pride which we all feel in the completion of this distinctive interpretive center which tells so effectively the story of the event that took place on this battlefield 99 years ago." Conrad L. Wirth, "Remarks at the dedication of the visitor center, Gettysburg National Military Park, November 19, 1962," Box 4, CWP, AHC. A complete transcription of the speech was printed in the *Gettysburg Times* (November 19, 1962).

[143] Dion Neutra to Donald Benson, December 22, 1961, Orndorff #26, Box 4, folder 12.

[144] John Heiser, facility management specialist, to Safety Officer, memorandum, August 21, 1991, maintenance files, park archives.

[145] Building Maintenance Files, park archives.

[146] "The Second Battle of Gettysburg," *U. S. News and World Report* (October 18, 1971): 66-67.

[147] Robert E. Koehler, "Our Park Service Serves Architecture Well," *AIA Journal* 1 (January 1971): 18-25.

[148] Director to Chief, Mission 66 staff, "100th Anniversary of the Civil War," June 12, 1965, National Park Service History Collection, Harpers Ferry.

[149] "Now Your Contributions Can Help to Save Gettysburg," *Washington Post* (February 7, 1960); "Gettysburg Battlefield, Portion is Reported Desecrated by Commercial Encroachments," *The New York Times* (January 21, 1962).

[150] Wolf Von Eckardt, The Park Service Dares to Build Well," *Washington Post* (March 29, 1964).

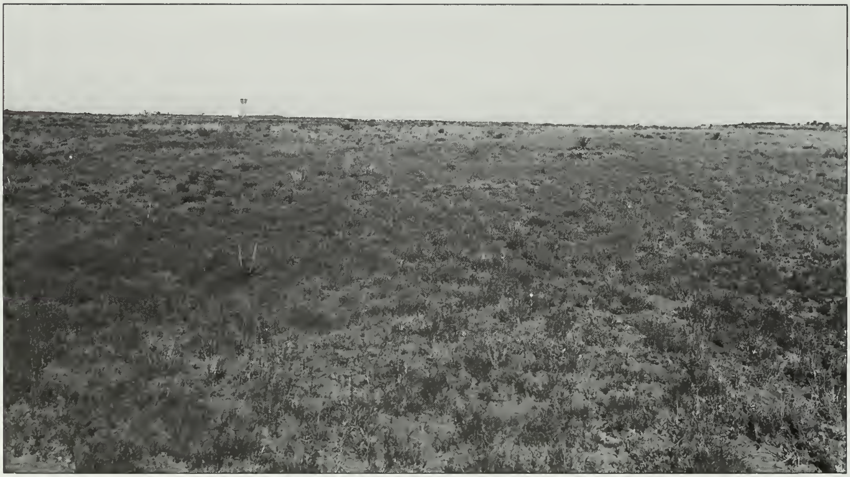


Figure 42. The site of the proposed Painted Desert Community, Painted Desert, Apache County, Arizona, ca. 1958. Courtesy National Park Service Technical Information Center, Denver Service Center.

CHAPTER 4

PAINTED DESERT COMMUNITY

PETRIFIED FOREST NATIONAL PARK, APACHE COUNTY, ARIZONA

The Mission 66 program brought improvements to national parks throughout the country, most often in the form of "master plans" designed around existing facilities or additions to older buildings. At Petrified Forest National Park in Apache County, Arizona, Mission 66 planners found a clean slate upon which to design a new Park Service headquarters complete with visitor, administrative, maintenance, and residential facilities. When planning began in 1956, the park contained an assortment of buildings—cabins, privately owned concessions, and adobe structures designed by Park Service architects—but these were concentrated along the highway and on mesas overlooking the Painted Desert. The new headquarters would sit alone on a barren site about three-quarters of a mile away. Park Service architects had already drafted plans for a modern administrative complex accompanied by a separate residential development of single-family homes.

Even more exceptional than this opportunity to create a community from scratch was the Park Service's choice of Richard Neutra and Robert Alexander as its designers. The Los Angeles architectural firm had an international reputation for minimalist modern buildings. By hiring Neutra and Alexander to design both the Gettysburg Visitor Center and the Painted Desert Community, Mission 66 planners not only demonstrated faith in modern architecture, but also an unprecedented willingness to experiment with its purest manifestation. The Painted Desert Community Neutra and Alexander envisioned in 1958, with its dense urban center and adjacent "International Style" row housing, was a shocking departure from the standard Mission 66 layout, not to mention the residential neighborhoods envisioned by the client. According to Neutra and Alexander, the flat-roofed, steel and glass buildings addressed the Park Service's tradition of harmonizing with the landscape and regional history through subtle elements, such as low silhouettes, "desert" color, and native plantings.[1] The Park Service would ultimately accept the streamlined visitor center and unfamiliar row housing, but not without questioning aspects of the design and its relationship to park values.

Petrified Forest became a national monument in 1906, a decade before the Park Service was established, but substantial development did not begin until highways were constructed during the 1920s. The completion of Route 66 brought tourists to the north end of the monument, where Highway 180 began its winding path through the Painted Desert and into the Petrified Forest. In anticipation of automobile tourists, entrepreneurs built a trading post for travelers on the rim of the Painted Desert and a store in the Rainbow Forest at the extreme south end of the park. Major Park Service construction first occurred during the 1930s, when the Civilian Conservation Corps (CCC) began improving park facilities. Led by designer Lyle E. Bennett, the CCC rebuilt the hotel and constructed several ranger residences. The new "pueblo-style" Painted Desert Inn featured carved timbers, tin lighting fixtures, and concrete floors decorated with traditional Native American patterns. Poised on the edge of the canyon rim, the Painted Desert Inn offered visitors spectacular views of the desert, a restaurant, curios, and limited accommodations.[2] This regional example of Park Service Rustic, "inspired by the dwellings of the Pueblo Indians," was mirrored in the employee residences built across the street. These were the types of buildings visitors expected to find in a national park.[3]

The Park Service was still struggling to revive itself after the war during the late 1940s, when designs were submitted for a modern building at Meteor Crater, a privately owned land feature about fifty miles west of Petrified Forest. Prominent architects including Frank Lloyd Wright submitted designs for a museum at the edge of the 570-foot-deep crater.[4] The commission went to Philip Johnson, co-organizer of the 1932 International Style exhibition at the Museum of Modern Art and, more recently, architect of the "glass house" (1949) in New Caanan, Connecticut.[5] Johnson's work must have seemed fittingly futuristic to his clients at Meteor Crater. The national interest in space exploration would skyrocket after the success of Sputnik, inspiring many architects to imagine the ramifications of space travel and its impact on design. In his writings of the 1950s, Neutra considered the global effects of "planetary traffic, transport and industrialization," as well as the aesthetic challenge presented by the lunar landscape, a place without cultural history.[6] Mission 66 architecture reflected this contemporary obsession with technological progress.

Although only a short distance from Petrified Forest, Meteor Crater was worlds away in terms of its "park" landscape. The local staff planning for Mission 66 improvement during the mid-fifties had to contend with the monument's former CCC buildings and a motley assortment of souvenir stores and restaurants including Jacob's Trading Post, Olson Curio, and Charles "Indian" Miller's Lion Farm/Painted Desert Park. The Mission 66 plan would not only clear the area of private concessioners, but also create new facilities and improve the road system. The proposal for Petrified Forest included "major development of a Visitor Center, picnic facilities, residential and utility area and location of headquarters in the Painted Desert section near U. S. 66 Highway."[7] By locating the new visitor center and headquarters on the "new Route 66," (now I-40) rather than at the south end, the park defined the modern motorist's experience. Visitors could stop at the center for a rest from the interstate or drive the loop road through the park to Highway 180 and back to I-40. Plans for an interchange into the park from the improved highway became a priority for the new headquarters scheme.

Before the Painted Desert project gained momentum, Park Service planners focused on Mission 66 work in Rainbow Forest at the south end of the park. Improvements would include a museum addition, store, and picnic grounds. Early proposals for enlarging the museum were produced by in-house architects in the summer of 1957. After considering a streamlined, concrete block building with a glass enclosed viewing terrace, the park approved a much simpler scheme by Regional Architect Kenneth Saunders. This 2,400-square-foot "addition to the visitor center" was under construction in October 1958 and completed by January of the next year.[8]

Mission 66 visitor centers were intended to function as "the hub of the park," but at Petrified Forest aspirations for the new headquarters building were even higher. Correspondence from Assistant Director Stratton indicates that in its early planning stages the Painted Desert Community was envisioned as a place where visitors could learn about all the national parks and their shared "National Park concept."[9] According to a fact sheet compiled by the park for newspaper reporters attending the dedication ceremony, the new building would "serve as an Information Center for all of the areas comprising the Park System, the first of its kind designed for this purpose, in the United States."[10] In preparation for this comprehensive new headquarters, the Park Service sent its own designers and planners to Petrified Forest before securing the services of contract architects. In October 1956, Paul Thomas and Glenn Hendrix, landscape architects from the WODC, and Jerome C. Miller, regional landscape architect, met at the park to discuss the part Mission 66 would play in the next master plan.[11] By August 1957, the park had approved an in-house "proposed layout" for the headquarters area.[12] The visitor center and parking for one hundred cars was located off Route 66, with twenty-three units of employee housing grouped around a looping access road some distance from the public facility. The segregation of housing from the visitor center and administrative complex, a primary objective in this scheme, involved building additional roads through the monument. Residences were two- and three-bedroom houses constructed of wood framing and pumice block. In elevation, these are one-story, rectangular buildings with simple, modernist lines—a deliberate departure from traditional Park Service housing.[13]

Over the winter, the Park Service continued to refine its plan for the Painted Desert. Architect Cecil Doty produced sketches for the park's preliminary master plan in February 1958.[14] Doty's sketches show the general layout of the community, with a separate apartment building and dormitory accompanying the visitor center. As in the earlier scheme, the residences are organized in an oval shape around an access road, though in this case much closer to the main complex. Shortly after approval of this plan, the Park Service reconsidered its design of the Painted Desert Community. Dissatisfaction with the proposal may have occurred as a result of a visit from Thomas Vint, chief of design and construction, and Assistant Regional Director Harthon L. Bill.[15] Vint and Bill met with representatives of the Fred Harvey Company on April 6. A few weeks later, the Superintendent and Regional Architect Kenneth M. Saunders traveled to the WODC to discuss the Painted Desert development. At this time, "preliminary talks were held with an Architect-Engineering firm." Shortly after, on April 20, Richard Neutra and Robert Alexander visited the park "to obtain the feel of the area and to discuss proposed work."[16] The next month, the architects discussed their preliminary plans with Conrad Wirth, director of the Park Service. Wirth was not impressed by the residential housing arrangement, which he thought more suited to a crowded urban area than the Painted Desert's endless expanse. According to Vint, Neutra showed little reaction to the criticism and, "although he took notes, he did not explain to us whether they were for the purpose of changing the plans to meet the Director's wishes or for the purpose of developing arguments in support of the plans he has presented."[17] The housing as built suggests the latter.

It appears that Neutra and Alexander began "developing arguments" to support their plans almost immediately. In a brochure entitled "Homes for National Park Service Families on a Wind-Swept Desert," the architects used diagrams, drawings, and text to sell their project, focusing on the special needs of Park Service families and the unique desert site. The community plan included provisions for storage—considered essential for the typical itinerant family—visitors, and social events which usually involved the entire community. The wind-swept aspect of the site was the driving force behind the design. The low profile, compact plan, and private courtyards resulted from wind "known to blast the paint off of exposed automobiles." Since the treeless site lacked visual privacy, the concrete walled patios offered the only opportunity for private green space. Neutra and Alexander addressed Park Service concerns even more explicitly in a discussion of "the dream home in everyone's mind . . . the separate, isolated cottage in the midst of un-touched nature." Although the architects themselves shared this dream of individual homes surrounded by trees, they explained that such an idyllic situation is impossible in most densely populated residential areas. The Painted Desert had the unusual luxury of space, but no foliage to maintain visual privacy. According to the architects, "the vast space around the house would be a menace impossible to maintain, and utility costs would be staggering." Rather than adapting the typical single-family home, Neutra and Alexander favored the Native American method of building a compound of dwellings surrounded by sheltering walls. The Puerco Mesa village became the model for the Painted Desert Community. The architects imagined private homes not only sheltered from the elements, but from the noise and intrusion of neighbors; residents would even enjoy privacy at night without drawing the blinds. The overall plan of the community incorporated larger "oasis" spaces between the rows of houses that served as wind blocks, sound barriers, and sheltered play areas.

Neutra and Alexander also addressed reservations the Park Service entertained regarding the visitor center. The visitor would approach a "cool, shaded, green oasis," where he or she could rest surrounded by services: the concessioner's shop, restaurant, and administration building. Conrad Wirth had advised the separation of Park Service and concessioner facilities, but the architects suggested that the concession and administration buildings share an entrance area "so that one will 'feed' the other." Concession and maintenance walls would be blank in order to focus attention on the lobby entrance, as Wirth desired. In closing, the architects presented the Painted Desert "village" as a microcosm of a city zoned into residential, commercial, recreation, and industrial areas, including apartments, school, civic center, and "parking for visitors from everywhere."[18]

The week before Christmas 1958, WODC Chief Sanford J. Hill and Park Service architect Charles Sigler met at Neutra and Alexander's office to discuss revisions in the plans. After receiving the architects' preliminary designs, the park had developed an alternative layout which relocated major buildings.[19] During this conference, the new plan was reevaluated and in the end, "everyone was pleased to return to the original plan with the Administration-Orientation Building on the right and adjacent to the National Park Service Utility Area while Fred Harvey's store-restaurant was placed to the left and adjacent to their storage building and apartments."[20] Despite this consensus, the Park Service's decision to significantly reduce the square footage of most buildings couldn't have pleased Neutra and Alexander.[21] Although correspondence indicates a good working relationship between client and architects, the firm was obviously inconvenienced by the Park Service's work schedule. According to the regional director, the superintendent and his staff had also "become quite discouraged due to these unavoidable delays."[22] Recent cuts in funding and, finally, the removal of the "package project" from the 1960 fiscal year budget, forced the Park Service to delay construction on all of its contracts—from roads and parking to utilities and buildings. In February 1959, the Director declared that after the architects completed their preliminary drawings, these should be shelved until construction funds were available.[23] Major buildings in "the program of 1958," including the $180,000 administration/orientation facility, were now slated for completion during the 1961 fiscal year. In his report of the meeting to the regional director, Hill revealed that the park had decided not to inform the concessioners of the year delay in construction until after preliminary drawings were approved. The anticipated years of waiting for building to begin "terribly disappointed" both Superintendent Fred Fagergren and the contract architects, who had hoped to start preparation of the working drawings immediately.[24]

Neutra and Alexander had several projects on the drawing boards when they accepted the commission for the Painted Desert Community. The firm was in the midst of designing buildings for St. John's College in Annapolis, Maryland; additions to the Museum of Natural History in Dayton, Ohio; the Gettysburg Visitor Center; and plans for the Ferro Chemical Company in Bedford, Ohio; to name a few. Neutra biographer Thomas S. Hines has singled out the St. John's buildings as precedents for the work at Painted Desert. This campus design gathered together several buildings with different functions—classrooms, an auditorium, laboratories, a planetarium—in a compatible arrangement around an open court. The modern brick and flagstone complex stood in close proximity to venerated seventeenth-century buildings. In true modernist fashion, Neutra explained his designs through abstract principles suited to the architectural style; the building attempted "to grasp and express this faith in values that transcend mere historic or modish relativities" through pure form.[25] Like lines in a Shakespearean drama that still ring true today, Neutra hoped to capture a timeless essence. The buildings appear to have been well received by both college officials and the architectural press. According to Hines, poor maintenance subsequently compromised the architects' achievement at St. Johns. A similar fate, exacerbated by faulty construction, would befall the buildings at Painted Desert.[26]

In choosing Neutra and Alexander as architects of the Painted Desert Community and the visitor center at Gettysburg, the Park Service fully accepted modern architecture as appropriate for the Mission 66 program. Other architects hired before and after this firm—Anshen and Allen and Taliesin Associated Architects—worked in the modern style but also designed buildings with "rustic" associations and centered social spaces around domestic features such as fireplaces. For Neutra, architecture could only express the modern age, with its exciting opportunities for efficient contemporary living. Not that Neutra ignored a client's desires; to the contrary, he spent a great deal of time and effort consulting with future residents. But the clients who hired Neutra and Alexander usually preferred the clean lines, bare surfaces, sun-filled rooms, and efficiency of modern design. Although infused with Mission 66 zeal, the National Park Service came equipped with a tradition of environmentally sensitive buildings. It would require all of Neutra's philosophical skill to communicate the appropriateness of the Painted Desert Community.

In the design and construction of the Painted Desert Community, architect and client would deal with the contradictions of decades of modern architecture in microcosm. The Park Service was wary of Neutra's radical row housing. However, when it came to details, Neutra and Alexander pushed the Park Service to consider every aesthetic choice, its associations and the sum of the parts. For example, in response to pictures of sample masonry patterns for the plaza wall submitted by the park, Neutra and Alexander replied that the example was "far too machine-made in appearance to be appropriate."[27] They suggested cutting the stone at the top and bottom, rather than sawing it, to create a less regular pattern. Even more significant, the architects gave an historical precedent for their choice, citing a *National Geographic* article on the pueblo restoration at Mesa Verde as a good model for laying up the irregular stone veneer. The photographs of cliffs at Wetherill Mesa show intricate pueblo ruins left behind by thirteenth-century American Indians. As he paged through *National Geographic*, Neutra could hardly have failed to miss an article about the Society's new headquarters in Washington, D.C., the "serene and timeless" structure designed by Edward Durell Stone. According to the architect, the building was "a blend of the National Geographic Society's dignified traditions and the finest modern technological refinements." During the early 1960s, modern architecture was promoted as both respectful of the past and reaching forward to meet the future.[28]

WHAT WILL THE NEIGHBORS THINK?

In 1949 Neutra appeared on the cover of *Time* magazine above the caption "What Will the Neighbors Think?[29] Almost ten years later, Neutra and his partner, Robert Alexander, designed the Painted Desert

Community in Petrified Forest National Park. As his presence in the popular magazine indicates, Neutra had finally become a mainstream, if eccentric, modern architect. This changing cultural attitude toward modernism was reflected in housing trends over the next decade. Superintendent Fagergren "noted with interest" an article in the September 22, 1958, issue of *Life* magazine about the conservation benefits of row housing.[30] The article featured Edward D. Stone's design of residential units for eight hundred and sixty-five families and a fifty-acre park, and illustrated how his plan utilized the same area occupied by a conventional housing tract without any green space. The row houses were compact, but light and airy, with elegant concrete grills for privacy, patios and views of a central park. As models for his residential design, Stone looked to ancient Pompeii, French villages, and, closer to home, "the first radical improvement in American community planning," Radburn, New Jersey, designed by Clarence Stein and Henry Wright in 1929.[31] For Neutra, who had grown up among row houses in Vienna, such design was hardly something new. But for Fagergren, who found "the principles stated . . . very similar to the proposed housing for the Painted Desert area," the article provided welcome reassurance. Neutra and Alexander's Painted Desert plan received approval from Park Service officials in early February 1960.[32] The architects were to produce working drawings in preparation for construction beginning that July.

The exceptional nature of the Painted Desert's row housing, at least within Park Service circles, is indicated by a February 17, 1960, memorandum from the Director to the five regions, EODC and WODC. Because recent budget cuts limited park housing expenditures to $20,000 per unit, all future park residences constructed throughout the park system were to be one of five standard plans, including two exclusively for superintendents and one duplex. This direction allowed for no variations except for substantially completed projects under the $20,000 limit. The proposed housing at Painted Desert, which was "to be completed in accordance with the approved Neutra plan," was an exception. The Neutra/Alexander row housing was singled out for special attention because it was "dictated in the interests of economy and good judgment."[33]

The standard plans the Park Service developed for all park employee housing, in place by March 1960, proved to be slightly less restrictive than first announced. Each region was sent the proscribed plans along with a list of "selective components," structural and aesthetic elements, from which it could choose. In addition, allowances could be made for houses on slopes, though it was strongly suggested that architects save money by choosing sites on level ground. The five house plans were all one-story rectangles with horizontal wood paneling covering the exterior and identical windows and doors. The four-bedroom superintendent's house included a two-car garage, and a living room with fireplace and dining area opening onto a terrace in the rear. The other houses had living rooms in the front with dining relegated to an undefined space off the kitchen. The three-bedroom superintendent's residence was identical to the standard three-bedroom except that it included a fireplace and two full baths. In the duplexes, cars were stored in a central carport so that residents could park and enter the house from the kitchen. Although the Park Service invested considerable effort in the development of easily built, low-cost housing, it did so at the expense of individual creativity, the architect's prerogative.[34]

In March, the park received a memorandum from Sanford Hill enumerating the extra costs required by the Neutra-Alexander housing designs. Fagergren feared that funding might be withdrawn if the park exceeded the budget, and explained that local contractors estimated higher costs for Park Service projects because they demanded better materials and included an extra charge for "government red tape." He suggested that the "justification data" for the Neutra-Alexander residences emphasize additional expenses—such as the region's higher union wage, expenses for travel to and from the site, and the high cost of skilled laborers in Arizona since the strike of 1959.[35]

Superintendent Fagergren was responsible, in large part, for promoting the Neutra and Alexander plans within the Park Service. In April 1960, he wrote to the Regional Director in defense of the concrete walls enclosing the Painted Desert Community.

> The Neutra-Alexander hous [sic] plans, particularly their proposal for a high wall enclosed yard or patio, have provoked considerable discussion. Hence I was and thought you might be interested in a comment made by Superintendent and Mrs. Jim Eden while I was visiting them at Page last week. They are building a solid wood fence about 7' high and said, "Everyone in Page, who can, is building a fence to protect themselves from the wind." Wind conditions at Page and Petrified Forest I would judge to be comparable.[36]

The Chief of Operations, Jerome C. Miller, responded to Fagergren's letter with his own thoughts on wind resistance, noting that Page had to deal with sand as well as dust. Finally, after discussing the matter with a colleague, he was convinced "to some extent."[37] Although Miller was most concerned with the effectiveness of the wind block, Fagergren's remarks suggest that criticism of the walls was as much aesthetic as functional.

The row housing remained the most controversial aspect of the plan, and in February the Park Service suggested a new arrangement for the residential units, as illustrated in a representative sketch.[38] Neutra and Alexander's original plan included three different housing unit types—

"A" at 1280 square feet and three bedrooms, "B" at 1032 square feet and two bedrooms, and "C" at 1346 square feet and three bedrooms.[39] WODC Chief Sanford Hill sent Neutra and Alexander floor and plot plan revisions and requested their assistance in producing new working drawings and specifications. Rather than using three "A" and three "C" units in each six-unit grouping, WODC preferred flipping the C's and using them for all units.[40] This arrangement had the advantage of providing "access to each patio without having to go through each respective house." The new plan would allow the park to build additional housing adjacent the "A" units, which had been considered in the January 1958 drawings. After approving the architects' revision of these corrections, Superintendent Fagergren suggested some further alterations, including a window in the kitchen for the housewife to observe her child in the courtyard and a "dinette" in place of the "pass through" in the kitchen area.[41] By this time, the Park Service appears to have been resigned to the aesthetics of row housing and concerned only with functional issues.

The designs Neutra and Alexander finished in January 1959 contained all of the elements laid out by Park Service planners, but the arrangement was very different. In-house designers were equally modern in their depiction of streamlined, concrete housing, concrete walls, and simple, rectangular buildings. All these choices depended on adherence to a modernist aesthetic. But the modern aspect of Neutra and Alexander's plan lay in the organization of spaces and the separation of public areas from administrative and residential zones. The parking lot provided easy access to the two places most important to visitors—the visitor center and the concessioner's building. Park offices were located above the public spaces and maintenance in the rear. The public buildings formed two sides of a courtyard, and although apartments for employees formed a third side, these were hidden by a concrete wall. The fourth side of the courtyard opened up to park apartments carefully hidden by planters and a landscaped area. Most unique for a plan of this type, housing was organized into four rows of one-story units just a short walk from the rest of the complex. In principle, the design achieved the Mission 66 goal of concentrating development in a limited space and therefore conserving natural resources.[42] The Painted Desert Community received a residential award citation from *Progressive Architecture* in January 1959, when the complex was still only a set of drawings. The magazine praised the most extraordinary aspect of the Community, its "compoundlike grouping of L-shaped houses with wind-shielding walls to the south and west and small high-walled patios where devoted care can produce oases of natural growth."[43]

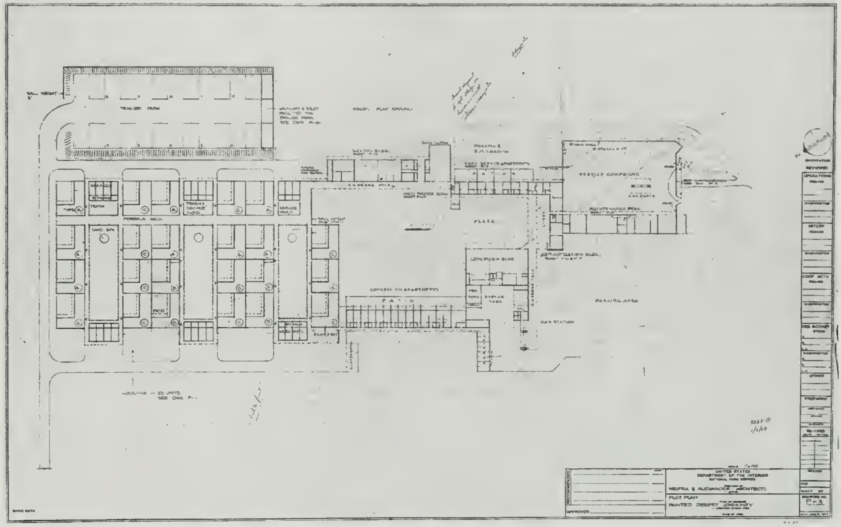

TRAILER PARK
PLAZA
PATIO
SERVICE COMPOUND
PARKING AREA
GAS STATION
UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE
NEUTRA & ALEXANDER ARCHITECTS
PLOT PLAN
PAINTED DESERT COMMUNITY

Figure 43. Preliminary site plan, Painted Desert Community, January 1959. Courtesy National Park Service Technical Information Center, Denver Service Center.

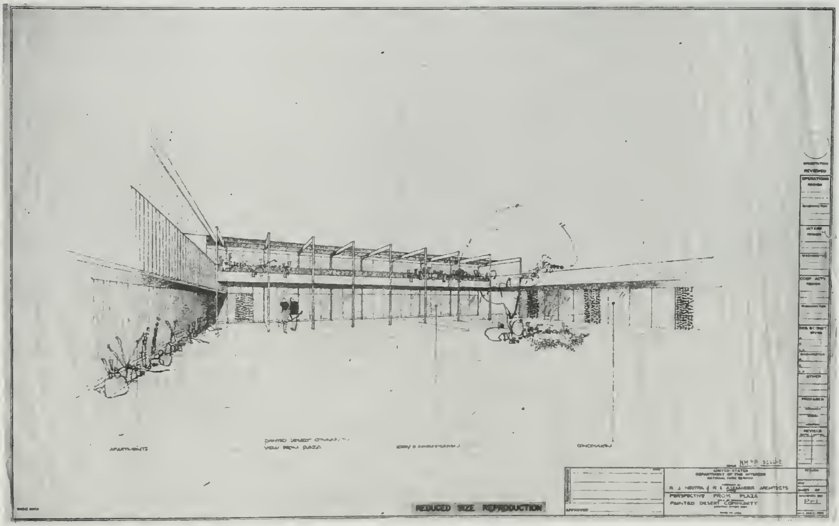

APARTMENTS
PAINTED DESERT COMMUNITY VIEW FROM PLAZA
CONCESSION
UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE
R. J. NEUTRA & R. E. ALEXANDER ARCHITECTS
PERSPECTIVE FROM PLAZA
PAINTED DESERT COMMUNITY
REDUCED SIZE REPRODUCTION

Figure 44. "Perspective from Plaza," Painted Desert Community, January 1959. Courtesy National Park Service Technical Information Center, Denver Service Center.

Building the Painted Desert Community

In April 1961, Petrified Forest National Monument prepared promotional material for "special visitors en route" to the Mission 66 Frontier Conference at Grand Canyon. The information included an update on Mission 66 development at Petrified Forest, a copy of the local magazine *Agatized Rainbows*, and a piece of polished petrified wood, courtesy of the Rainbow Forest Lodge. These honored guests may have also witnessed tangible evidence of Mission 66 progress—the laying of foundations at Painted Desert.[44] The construction of the Community had begun in January under four separate contracts. After the standard bidding process, the contract for utility systems was awarded to the McCormick Construction Company of El Paso.[45] The Kealy Construction Company, building engineers and contractors from Farmington, New Mexico, began work on their contract for the administration building and apartments in April. The residential job went to Rasmussen Construction Company of Orem, Utah. A few months later, the Rasmussen Company also won the contract for the community building, the maintenance yard behind the administration building, and a trailer park adjacent to the residential area. The contractor for the Fred Harvey Company's private concession, the "Painted Desert Oasis," would be determined as construction progressed.

The Administration Building, Apartment House and Gatehouse: Kealy Construction Company

When the Park Service's project supervisor, Eugene T. Mott, arrived at the building site on March 27, 1961, McCormick Construction Company was installing water, sewer, and electrical systems. The Kealy Company began masonry work on the administration and apartment buildings in early April, but progress was slowed almost immediately. Although the steel and concrete frame buildings appeared simple, Neutra and Alexander specified materials and techniques to achieve subtle aesthetic affects. Cement blocks were special ordered, with each lot dyed and the color chosen based on "the assumption that the interior and aggregate of these blocks will be exposed by sandblasting after erection, and immediately prior to waterproofing . . ."[46] Neutra and Alexander even requested a sample of the contractor's sandblasting ability, as displayed on a typical block. The special order of concrete and the drying and blasting process resulted in expensive construction delays during the first months of Kealy's contract.[47]

As they waited for the blocks to arrive, contractors began to assemble the steel frame in concrete bases, which were later removed and reset "exactly as shown in the drawings." In early July, interior columns were set in their new bases and concrete slabs poured according to detailed

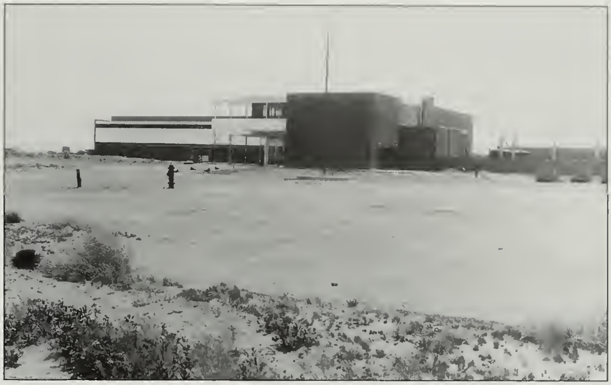


Figure 45. The visitor center and apartments under construction, ca. 1961, before work began on the Fred Harvey concession building. Courtesy National Park Service Technical Information Center, Denver Service Center.

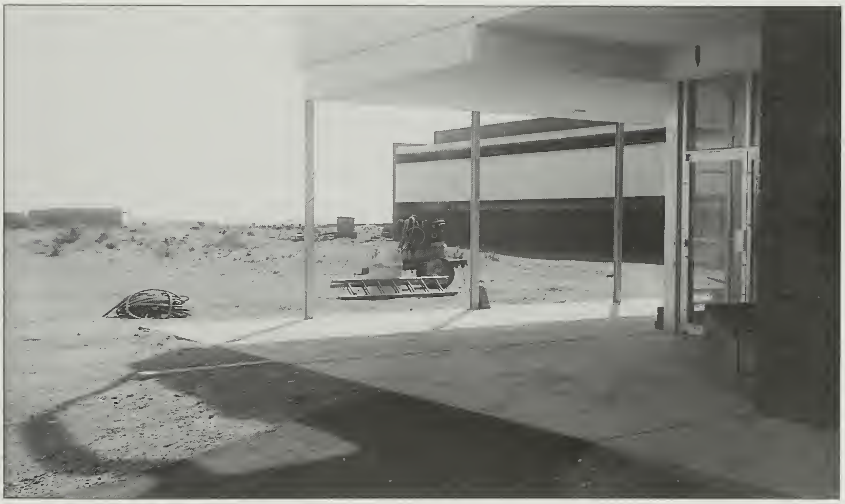


Figure 46. The original entrance to the visitor center during construction, ca. 1961. Until the 1970s, the entrance was recessed and faced the corner of the parking lot. Courtesy National Park Service Technical Information Center, Denver Service Center.

specifications. Once the mortar color was approved, the final pour was made on the patio foundation walls. By the end of the next month, the second floor steel decking was under construction and wood framing of partitions and floor joists had begun in the apartment building. On October 1, 1961, the building was half finished and "very good progress was being made." Excavation of the site for the new gatehouse began in early November. Despite bad weather, the contractors completed all the aluminum framing around the gatehouse and administration building and started setting the glass in the visitor center.

The Kealy Company continued to work sporadically over the winter, and by March 1962, it was concentrating on the planters, terrace and balcony as well as the louver enclosure on the apartment house roof. At this point, with the administration building about eighty percent complete, Kealy's vice-president Harry J. Mills expressed extreme frustration with Neutra and Alexander, citing the lack of a "room finish schedule" as a major reason for subsequent construction problems. Mills wrote that in "twenty-four years in the construction industry, we have never before encountered a job approaching this size without a room finish schedule as a part of the contract documents." He went on to describe the lacking schedule by its dictionary definition—a list of details—and explained the confusion arising from its non-existence. Evidently, the architects were exacting in their requests and attention to details, but baffled the contractors with "the obscurity" of their plans. After absolving the Park Service of any blame in the situation, Mills mentioned that Kealy's job superintendent had been granted a leave of absence "due to the nervous strain and feeling of failure, brought on by the many worries and problems of this project." This was the superintendent's first failure to complete a project.[48]

A letter from Neutra and Alexander dated December 1, 1961, indicates that conflict had been brewing over several months. Dion Neutra, representing his father's firm, refuted the contractor's claims and blamed Kealy for "incomplete study of the drawings." On their part, the architects, who were "running way into the red on each project," protested the inordinate amount of time spent reviewing shop drawings, inadequate funds, and the failure to determine manufactures and products during the early stages of construction. As these comments suggest, poor communication was one factor contributing to the slow and costly construction of the Painted Desert Community. The contractors may have needed especially clear instructions to complete the building, which was not only an extensive project, but probably very different from any other job they had encountered. Matters were complicated by the fact that, in many instances, the architectural firm, Park Service architects, and superintendent all attempted to advise the contractors, an arrangement guaranteeing delays and misunderstandings. Information was frequently relayed to the contractor through the superintendent, who usually paraphrased the architects' requirements. Since the client was also its own architectural firm, each stage of the progress was further supervised by many experts and their supervisors. In addition, funding was a continual problem throughout the project; certainly delays wouldn't have been as infuriating if the budget allowed for compensation. Most frustrating for the architects must have been the continual insistence on cutting costs, reductions that ultimately infringed on the integrity of their design.[49]

Although considered ninety-eight percent finished by May 31, 1962, completion of the administration and apartment buildings awaited the arrival of customized ceramic tile. The special tile not only delayed construction but also angered contractors and subcontractors, who could not obtain the requested floor covering. According to Neutra and Alexander, the desired glazed granite tile was merely ordinary unglazed tile covered with a clear glaze and fired—a process easily performed by any tile manufacturer. The architects appreciated this type of glazed surface both for its appearance and durability. Most of the rooms in the administration building were to have white granite tile covering the floors and snow granite on the walls. To the contractors, such devotion to a difference of texture or sheen appeared foolish when valuable time was at stake. The Kealy Company was appeased after the park granted its request for an extension of construction time due to the tile delays.[50]

As Kealy Company officials ironed out their administrative problems, concrete was poured for the north sidewalk and reflective pool, the final pour of the contract. In early April, the metal kitchens were installed and interior millwork begun, including hanging the wood doors. A layer of silicone water repellent was applied to the exterior concrete blocks. Final work on the interior continued through early May, with the installation of "mill-work, hardwood veneered panels in the lobby, hardware on the closet doors and a good amount of painting." As the Kealy Company awaited arrival of the ceramic tile, preparations were made for an anticipated visit from project architect John Rollow of Neutra and Alexander and Boris M. Lemos, the firm's consulting mechanical engineer. Inspector Mott estimated a completion date of June 28, 1962, but poor installation of the ceramic tile resulted in further delays. Finally on July 7, the buildings were considered complete and the government expected to "begin moving into the buildings right away."

Superintendent Fagergren officially announced the movement of park headquarters from the Rainbow Forest to the Painted Desert on July 18, 1962.[51] After the exhibit installation, anticipated to occur the next week, the building would be open for visitors. On August 4, 1962, employees of the Petrified Forest were invited to a pot-luck dinner and tour of the new visitor center. The public received its first glimpse inside the building August 12 and was welcomed to a special open house during a celebration of Founders Day on the 26. Visitors toured the "enlarged and new exhibit room, and the new building that serves not only as a visitor center, but houses administrative offices," as well as "other recently completed facilities in the 'Mission 66.'"[52] Exhibits in the visitor center lobby consisted of a 4- by 6-foot vertical wall panel describing the park and a similar horizontal panel about southwestern parks and monuments mounted adjacent the information desk.[53] The room was also decorated with photo murals and specimens of petrified

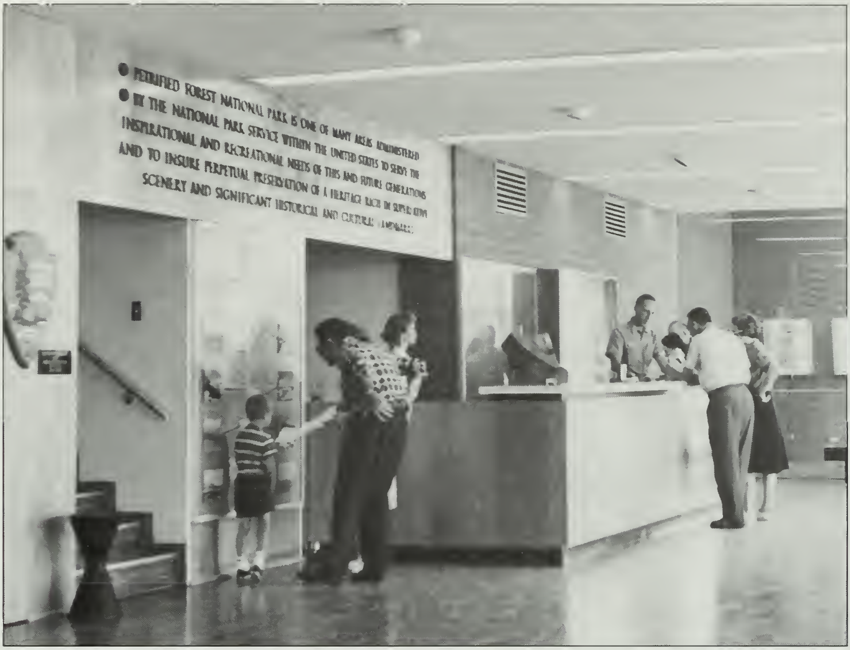

PETRIFIED FOREST NATIONAL PARK IS ONE OF MANY AREAS ADMINISTERED
BY THE NATIONAL PARK SERVICE WITHIN THE UNITED STATES TO SERVE THE
INSPIRATIONAL AND RECREATIONAL NEEDS OF THIS AND FUTURE GENERATIONS
AND TO INSURE PERPETUAL PRESERVATION OF A HERITAGE RICH IN
SCENERY AND SIGNIFICANT HISTORICAL AND CULTURAL LANDMARKS

Figure 47. Visitor Center lobby, Painted Desert Community, ca. 1963. Courtesy National Park Service Technical Information Center, Denver Service Center.

wood. Dedication of the facility would occur after completion of the Fred Harvey building, and, the Superintendent hoped, once the monument received its long awaited national park designation. When Petrified Forest became the 31st national park on December 9, 1962, the administration awaited only the completion of construction to acknowledge its Mission 66 improvements.[54]

Shortly after the visitor center's public opening, Assistant Director Stratton wrote to the Superintendent to commend the Painted Desert Community and his patience throughout its lengthy construction. The letter was inspired by comments from Dr. Edward B. Danson, of the Park Service's National Advisory Board, who was very impressed by the building. Stratton explained the Park Service's previous prejudice against the Community as a general fear of change.

> Whenever a new architectural thought is broached, even though the philosophic base may be age old, there is a National Park Service instinct, bred by conservatism, to feel the result may lead to contentious criticism. However some of our very best buildings of recent years that may cause immediate critical response, are, in fact, those that within a very short period of time turn out to be our best;—those on which we received the most favorable comments.[55]

The Painted Desert Community had certainly pushed the Park Service beyond any standard model of modern architecture. If Stratton's comments proved true, the complex would be hailed as a great success for Mission 66.

THE RESIDENTIAL COLONY AND THE MAINTENANCE BUILDING, COMMUNITY BUILDING, TRAILER PARK BUILDING, AND VEHICULAR STORAGE SHED: RASMUSSEN CONSTRUCTION COMPANY

Weekly construction reports kept by the Park Service's project supervisor, Eugene Mott, indicate serious problems with Rasumussen Construction Company from the beginning of the initial contract in July 1961. During their first week of work, Mott noticed that the contractors did not "take into consideration the amount of fill work to be done and the height of the building foundations required." He suspected that these miscalculations had resulted in the company's low bid on the project. Mott soon learned that Rasmussen did not belong to a union and that he had recently failed to complete work at the Grand Canyon. Despite these early warning signals, the park awarded the Rasmussen Company the contract for the maintenance, community, and trailer park buildings. Work on this second project began in early March 1962, when the Company's residences were almost half complete.

The Rasmussen Construction Company had begun building the eighteen Painted Desert Community residences in July 1962. The concrete and steel frame houses were to be of concrete block matching the other buildings, with interior walls finished exactly like the exteriors "to maintain a continuity of appearance and provide a linear characteristic to the wall pattern."[56] Windows and doors were aluminum framed. Except for the interior concrete walls, surfaces were finished with plaster and gypsum board. Once construction advanced, Neutra and Alexander reported a "variation" in their specifications for concrete-block construction. The contractors had used closed-end blocks in areas with vertical reinforcing steel that needed open end blocks to accurately place the steel. The architects explained how to correct the problem through the use of a "centering device." Similar open blocks were especially important in the community building, which required "most careful workmanship on masonry work."[57] By May 1962, cracks had developed in the concrete walls of the apartments and administration buildings, and in preparation for the community building, the architects suggested placing control joints in the walls. In addition, they advised testing the concrete block for deficiencies in absorption, shrinkage, and expansion capability.[58]

During this repair progress, Superintendent Fagergren revealed the first hint of serious problems with the Rasmussen Company. Not only was work proceeding slowly on the residences, but it was not "conducted in a business like manner." He suspected that the cost of "inspection and supervision has been excessive in order to gain compliance with specifications."[59] At this early date, with the projects in full swing, the superintendent could not know how serious the situation would become. By mid-March 1962, Mott reported that Rasmussen had been given thirty days to redeem himself and the contract. In April he still required "constant vigilance." As work slowly continued, the Rasmussen Company fell further and further behind in the construction schedule, not to mention in paying its debts. Over the winter of 1961-1962, park officials reviewed the previous work and discovered multiple instances of failure to comply with specifications. Problems ranged from insufficient bolts to poorly fitting beams. The Park Service withheld payment until submittal of payrolls. The Company was warned that a visiting inspector, Red Newcomb, would enforce "strict compliance with the plans and specifications."[60] Finally, in October 1962, the residences were inspected and approved on the condition that Rasmussen address several issues: the saturation of walls during the rainy season, a fuel leak that damaged the roof of one unit, and waterproofing of the carports.[61]

Throughout construction, the Park Service consulted Neutra and Alexander on every aspect of interiors and then forwarded this information to the contractors and subcontractors. The architects designed a cabinet arrangement and based their approval of Youngstown kitchens on the provision that the bottom cabinet contain "two large drawers." They also selected materials and colors for cabinet tops and splashes. Superintendent Fagergren sent the architects bundles of brochures, including information on Norse refrigerators and grills from the R. E. Naylor Company. The architects were to examine a sample of Hermosa tile and choose the appropriate color. All of the mechanical systems and light fixtures were also architect approved.

Inspector Mott reluctantly accepted the residences as complete on August 24, 1962. According to Mott, Rasmussen had "in his own disorganized way, done the best that he is capable of doing." At that point, $3,800 had accumulated in liquidated damages. While the Park Service attempted to recoup its losses, park families began moving into the new row housing. The eighteen units were organized into four rows, the two central consisting of blocks of six units each. Covered walkways supported by smooth metal poles led to the fronts of the rows. The floor plans were flipped, so that the bedroom and living wings alternated. Single rows of units facing northwest had a front door and clerestory windows with entry to the patio from the rear. In the first row of units in each of the double rows, access to both living area and patio was from the front because the patio areas were enclosed by the rear walls of adjacent apartments. All of the houses were oriented toward the patio spaces, which were "outdoor rooms" intended to block any external views. The wall of the living room facing the patio was all windows. Each bedroom featured a strip window facing the patio space and one wall of bare concrete block. Veneered golden-colored woodwork contrasted with the aluminum-framed louver windows and exposed concrete surfaces.

The character of the row housing was strongly influenced by the color scheme—bright white, metallic gray, and bright blues and golds. Inside, the houses were painted white, tiled in "salt n-pepper," "dawn blue" or "inca gold," and equipped with "frost white," "primrose" or "aqua" kitchen counters. The interior colors were coordinated with the exterior in five schemes, "A" through "E," which were sprinkled throughout the four rows of units. For example, unit "A" had light yellow and gold accents, primrose counters, gold ceramic tiles, and a gold exterior. Unit "C" was painted with light and dark blue interior accents and featured white counters, beige cabinets, and white tile. Exterior plaster surfaces were white, but doors were color-coordinated, along with the carports on either end of each row, in four groups: gold on the east; rust for the front of the next row, but dark yellow for the back; light yellow for the front of the third row, but blue for the back; light blue for the west. The carports were painted to match the front doors, from east to west—gold, dark yellow, and blue.[62]

Once residents had moved into the housing, Neutra composed suggestions for furnishing the units. Despite the reduced room sizes, the result of congressional budget cuts, Neutra believed that a feeling of spaciousness could be obtained by hanging pictures to be viewed from a seated position. Drapes should be light colored so that they might open up the view to the patio, which was intended as an outdoor living area. Neutra's obsession with light and sun is perhaps best conveyed by his ideas for the individual patios and their relationship to the house. "There against the gray block walls light blooming plants and shrubs, preferably flowering white, cream, lemon, yellow or orange, will give the best effect and convey the feeling of sun penetrating, without any glare, into the living areas of the occupant family."[63] The architect also suggested light-colored carpets and offered to provide additional advice on the selection of appropriate furniture, if necessary.

As park employees adjusted to their new homes, Rasmussen continued work on the community and maintenance buildings, scheduled for completion November 2, 1962. Evidently, pressure from the Company's financial backer, Dr. F. B. Wheelwright (Rasmussen's father-in-law), led to greater effort on this contract. By September 15, the roof framing for the community building was in place. A few months later a crack had developed in the parapet wall on the northwest corner of the building.

The contractors rebuilt the wall with 8-inch-thick blocks instead of the required 12-inch blocks, thereby causing further delay and accruing additional expenses while the error was corrected. Although interior partitions and furred ceilings had been completed in the maintenance and community buildings by the end of October, the Park Service was considering ending the contract. This threat seems to have motivated the contractor to speed up work. On November 11, the day before the buildings were scheduled for completion, the Ferguson canopy doors were installed on the maintenance shop and the curtain tracks in the community building. Work dragged on as the contractors waited for a delivery of roof gravel from Barstow, California. Mott predicted that Rasmussen would use the architect's failure to send the color schedule on time as an excuse for delays; in fact, he was already waiting for "the roll-up door, sliding door, aluminum door, louver windows" and other items. The Christmas holidays passed with the building looming at the ninety-nine percent complete mark.

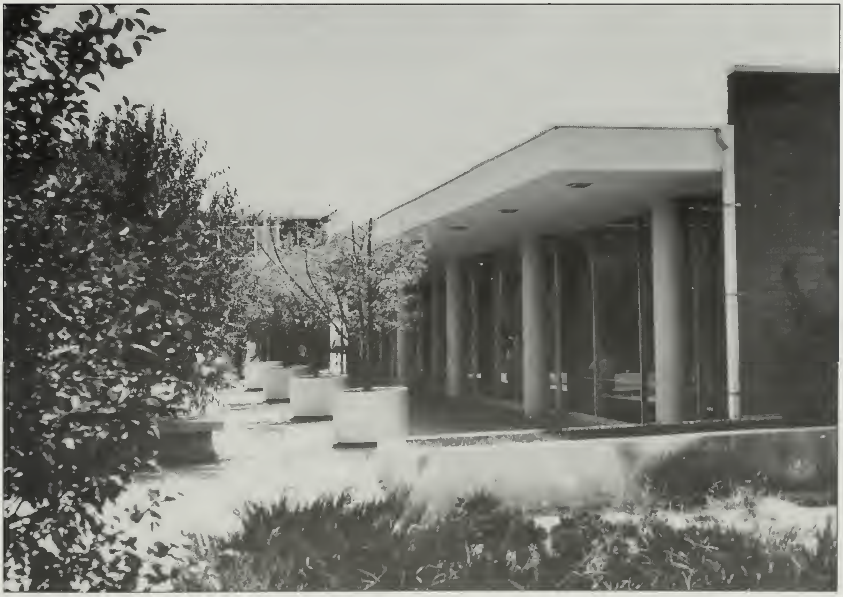
Although the maintenance, community, and utility buildings were accepted as substantially complete by late March 1963, the construction ordeal was only just beginning. In February, the Rasmussen Company had filed an appeal to its contract with the government for the eighteen residences. Over the next few years, contractor and client would argue over the liquidated damages assessed as the result of extensive delays. In the meantime, Packer Construction Company, which had recently constructed the Fred Harvey concession building, completed the final work on Rasmussen's maintenance contract in September 1963. The modest maintenance and utility buildings showed no sign of the effort that went into their construction. These functional structures consisted of two rectangular wings behind the visitor center; high concrete walls blocked any view from the parking lot. Park Service employees entered the parking and service compound from the rear. Maintenance offices could also be reached through the visitor center lobby. The community building stood between the Park Service apartments and the housing units. An aluminum roll-up door formed almost the entire front of the building, and opened to reveal a large rectangular meeting space with a movie screen at the far end. The high ceiling and clerestory windows contributed to its theatrical effect. Floors were rubber tile and walls plastered. This "multi-purpose room" included a kitchen and storage space. The trailer park building, located at the far corner of the complex, provided temporary employees with bathrooms, storage, and laundry facilities. Twelve trailer spaces were graded and planted.

The Fred Harvey Building: Packer Construction Company

Concrete was poured for the foundation of the Fred Harvey building in early September 1962. Inspector Mott was encouraged by the engineer's initial efforts, but his enthusiasm waned after delivery delays and poor weather slowed progress. The metal roof decking and structural steel framing was not in place until mid-November, and even this work was slowed by "a jurisdictional dispute between the steel workers and the sheet metal workers." The building was about half complete on December 16, 1962, and the "aluminum window walls" were added the next week. Construction was considered on schedule January 5, the last day Inspector Mott reported on the project. The glass and aluminum wall was in place and work had begun on interior plastering.

During the building's design stage, Neutra had urged the Fred Harvey Company to allow a solid concrete front facade, rather than standard shop windows that would make the entire complex "appear like a shopping center, adjacent to a shoppers parking place."[64] Although not overjoyed with the conspicuous location of the gas station, Neutra thought the bare wall, "without any displays or advertisings," a proper approach to the park plaza. This entrance was carefully calculated to give a tantalizing view of the landscaping and reflecting pool, before revealing the services of the Fred Harvey Trading Center, Restaurant, and Lunch Room through a steel and glass wall. From the parking lot, the only decoration on the facade of the concessioner's building was the curving script of "Fred Harvey" above steel letters announcing "Painted Desert

Figure 48. The Fred Harvey Building and courtyard. Courtesy National Park Service Technical Information Center, Denver Service Center.



Oasis." To enter the building, visitors first walked into the open plaza and then turned left to face the wall of shop windows and the glass double-door entrance. The shop was connected to a lunchroom with counter, which could also be entered from the other end of the plaza. A series of evenly spaced tile-covered columns ran the length of the window wall. The small yellow and white tiles resembled those used on the Gettysburg Cyclorama ramp in size and texture.

THE SCHOOL AND TEACHERAGE

Although an integral part of the plan, the school was not constructed along with the rest of the complex and remained incomplete at the dedication ceremony. An "elementary school site plan" and technical description of the 1.14-acre area had been drawn in April 1961, and the park superintendent met with the superintendent of schools to discuss the facility that September. According to annual reports, the park expected the school building and "teacherage" to be complete by June 1962.[65] The St. Johns School Board was to receive funds from the Office of Education (Housing and Home Finance Agency) to complete the project. Perhaps because of this combination of federal and local funding, the contract for the school was postponed. Neutra was still meeting with the superintendent to discuss plans for the school in January 1963. In a letter to Clark Stratton, head of Park Service Design and Construction, he expressed hope that work could begin on "the rural school building with which we had been concerned also since the beginning of our design studies." However, final working drawings dated March 11, 1963, were produced not by Neutra and Alexander, but by Robert E. Alexander, F.A.I.A. & Associates, Architects and Planning Consultants.[66] The school was under construction by Arimexal, Inc., in early March 1964, but then quickly stopped due "to non-payment of claims." The park anticipated that the bonding company would have to take over the contract.

The rectangular school building was located between the community building and the residential units, but oriented not towards the neighborhood, but the southern desert expanse as if to protect students from distractions. Other than a strip of windows, "Painted Desert School" in metal letters provided the only ornament on the concrete block of the south facade. The plan consisted of two open classrooms separated by an optional partition. Movable partitions further divided one side of the first classroom. Below the windows, built-in cabinets extended the length of the rooms. A corridor led from the central classroom to a storage area for students, a supply closet, and an office. Bathrooms were also located in this area.

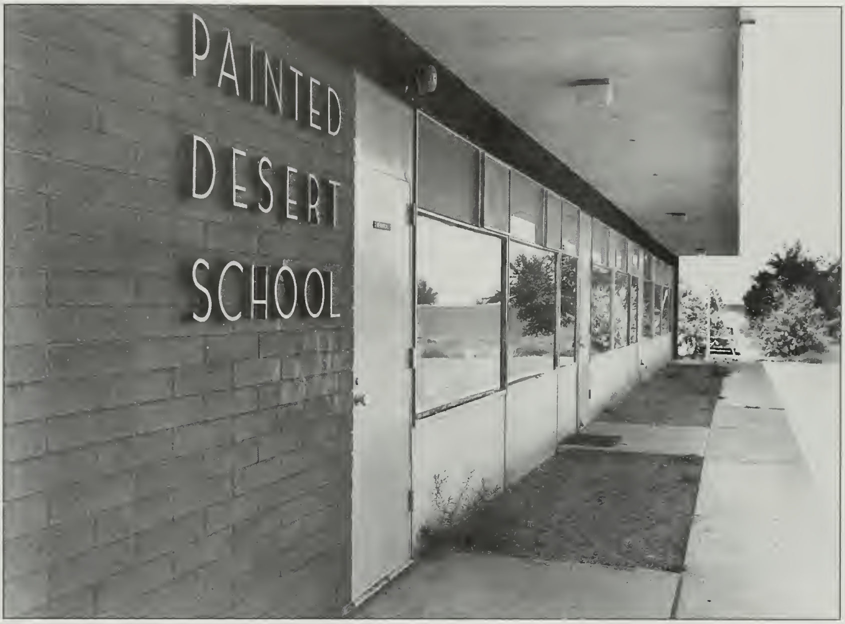


Figure 49. Painted Desert School, July 1969. Photo by Huntsman. Courtesy National Park Service Technical Information Center, Denver Service Center.

The teachers' residences, called the teacherage in park reports, were near the corner of the school, the first in the second row of residential units. The only duplex, the teacherage consisted of two one-bedroom apartments sharing a central wall that extended into the patio area. Each unit was equipped with a small kitchen and dining area in one corner of the living room. A utility room and bathroom were located off the bedroom. As in the row houses, selected walls were exposed concrete. When the school was closed in the early 1980s, the teacherage became regular employee housing.

Final work on the Painted Desert Community's physical plant and the visitor center's interpretive exhibits continued into the spring of 1964. A contract for "covered walks and related work," including fences, was awarded to Glen D. Plumb of St. Johns, Arizona, in May, as the Packer Company finished up the "grounds improvement, headquarters area." Plans had been received for the wayside exhibits and bids were about to be advertised. Over the summer, parts of the exhibits were prepared at Grand Canyon and a contract artist completed work on some of the panels.

THE PAINTED DESERT COMMUNITY

The Painted Desert Community, estimated to have been completed by July 17, 1962, was finally finished in the last week of April 1963. During the course of construction, Inspector Mott noticed a change in attitude toward the building as people became more accustomed to the style and began to appreciate some of the design decisions.[67] He concluded his final report with the following statement: "When this housing project was first begun and up until the residences were occupied, I heard many critical comments concerning their design. Now I hear more favorable comments. After nearly two years in the area I'm satisfied that the walls are definitely required to combat the high winds and dust. Others are finding this to be true also." The completion of the new $1,460,000 facility was celebrated at a dedication ceremony on October 27, 1963. The event, co-sponsored by the Holbrook-Petrified Forest Chamber of Commerce, began at 1:30 p.m. with a musical prelude and national anthem performed by the 541st Air Force Band. A speaker's stand was erected on the plaza facing the visitor center, and guests sat in the space surrounding the planters. After a general welcome by Superintendent Humberger, Director Wirth and Assistant to the Secretary of the Interior Orren Beaty, Jr., said a few words. The dedication address was delivered by Dr. Edward B. Danson, Jr., secretary of the Advisory Board on National Parks, Historic Sites, Buildings and Monuments. Superintendent Humberger then invited guests to tour the facilities and witness the ribbon cutting ceremony at the visitor center. Richard Neutra posed with park officials in front of the un-cut ribbon.[68]

The new visitor center was the highlight of the celebration. In the drab desert environment, its bright white concrete and aluminum buildings sparkled. No one had ever seen anything quite like it. Upon pulling into the visitor center parking lot, visitors immediately read the sign, "Painted Desert Visitor Center" and recognized the Park Service's arrowhead logo. Restrooms were prominently located to the right; although actually within the visitor center building, they were entered from outside. The high walls screening the maintenance area from the parking lot, the Fred Harvey building, and this section of the administration building were "desert-colored" concrete block. In contrast, the entrance to the visitor center was indicated by a smooth white exterior and floor-to-ceiling windows, which provided a glimpse of the spacious lobby. Visitors entered double glass doors and were naturally drawn towards the information desk near the center of the room. On the wall above the desk, metal capital letters attached directly to the wall announced that "Petrified Forest National Park is one of many areas administered by the National Park Service within the United States to serve the inspirational and recreational needs of this and future generations and to insure perpetual preservation of a heritage rich in superlative scenery and

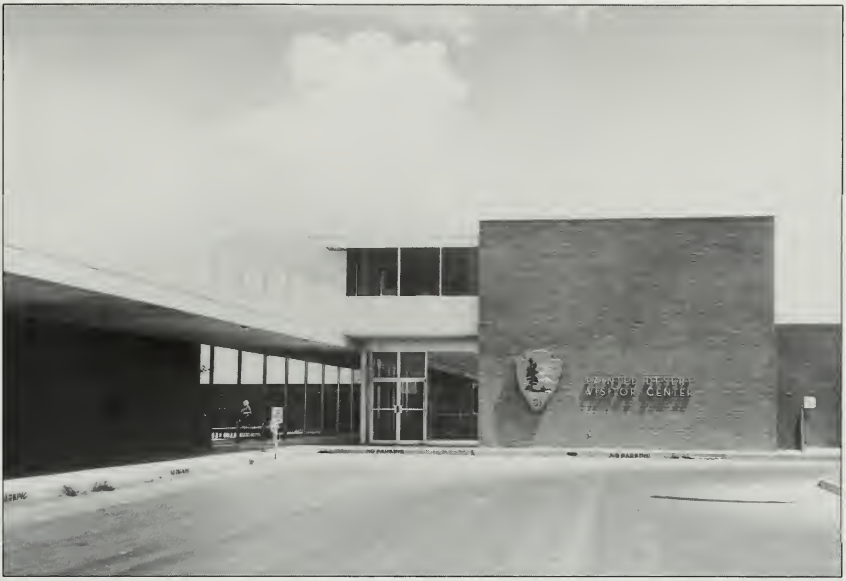


Figure 50. Visitors entered the Painted Desert Visitor Center from the parking lot and the Fred Harvey Building from the courtyard. Courtesy National Park Service Technical Information Center, Denver Service Center.

significant historical and cultural landmarks." On either side of the desk, exhibit panels, which Neutra called "translucency illuminating boxes," were arranged at eye-level and a map and "slide illuminating case" mounted directly on the exposed concrete block walls. The floor was shimmering blue tile. A wall of floor-to-ceiling windows and steel columns faced the courtyard. It was an open, elegant, functional space.

As they strolled around the plaza, visitors must have wondered about the cantilevered steel balcony above the visitor center. A stairway at the far end of the lobby led up to the second-floor administrative offices. The rooms on the courtyard side opened out onto the terrace, which also connected to the corridor running parallel to the upper level of Park Service apartments. From the plaza, visitors saw this corridor as a horizontal strip window above a masonry wall—a facade without any hint of domesticity. Although the Park Service employees' private and public spaces were located in close proximity to the visitor center, park visitors were unaware of this secret world.

In their wanderings outside the visitor center, visitors were also expected to examine the reflecting pool in the far corner of the plaza, an exotic spot in this desert environment. The architectural firm and the Park Service collaborated in the design of the plaza, and in February 1962, Neutra and naturalist Philip F. Van Cleave exchanged ideas about

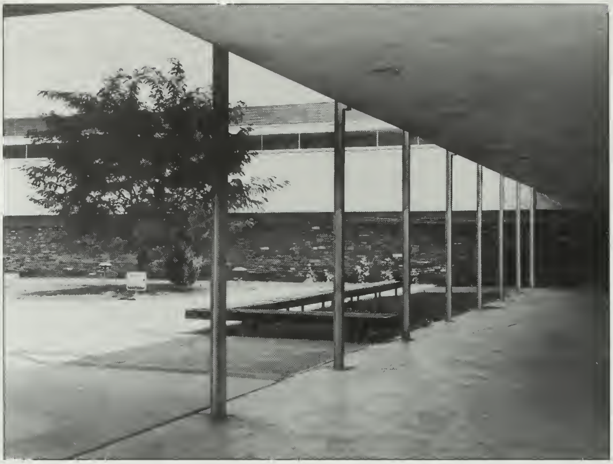


Figure 51. The second floor apartments viewed from the courtyard outside the Visitor Center. Courtesy National Park Service Technical Information Center, Denver Service Center.

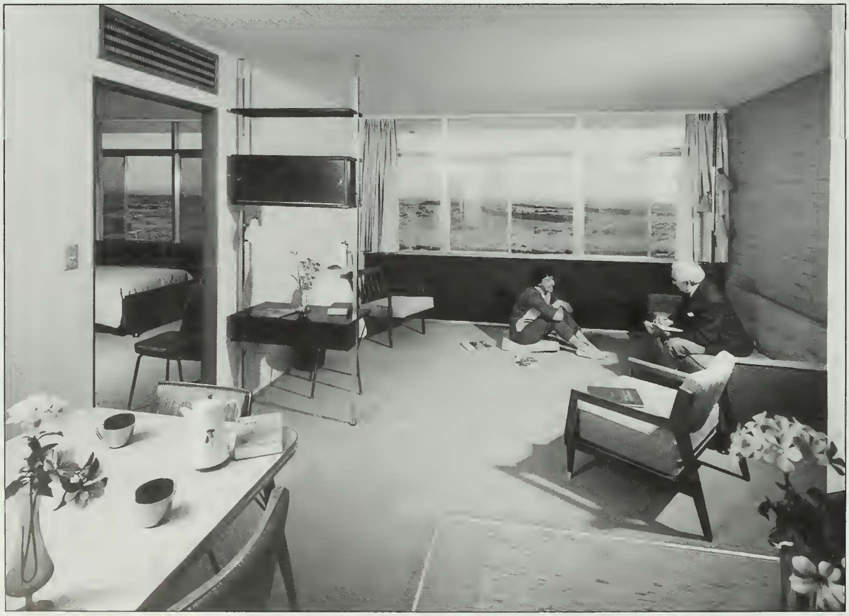


Figure 52. Richard Neutra chats with a resident of the Painted Desert Community in her apartment. Photo by Beinlich Photography. Courtesy Petrified Forest National Park archives.

its landscaping. Initially, Neutra overwhelmed Park Service personnel with plans for a lush "Triassic" garden, but in subsequent correspondence, the architect explained that he merely hoped to demonstrate the "degeneration" of the giant prehistoric species into petrified specimens and the "tiny relatives" of the present day. Superintendent Fagergren agreed that the planters and pool might be devoted to such an exhibit. In describing his ideas for the central space, Neutra explained that the entire scheme was based on the mesa shelters of the Puerco Indians. Through careful planning and landscaping, the buildings would harmonize with the landscape and relate to the region's history.

> The desert planting for example, around the project at the entrance of Petrified Forest National Park was to be brought right to the wide enclosure walls in more or less desert colored brick. Most window openings would turn to interior patios or circumwalled garden courts protected against the desiccating and evaporating desert winds. The center plaza was to become a demonstration of such wind protected planting area, as it is also exemplified by the Puerco Indian village which in archeological finds and ruins is being inspected by the visitor.[69]

These ancient residents crowded together in underground dwellings that provided both "wind-stillness" and shade. The park still contained remnants of prehistoric settlements sprinkled among the petrified trees, and colorful pieces of rock recalling the area's Triassic past, when the deserts were verdant with growth and wildlife. In the plaza space, Neutra hoped to introduce visitors to this ancient park history with a glimpse of the region's incredible transformation from lush forest to arid desert. Relatives of prehistoric trees, such as the ginkgo biloba and araucaria were arranged alone and in pairs, along with the "resurrection plant," horsetails or equisetum and other appropriate native species.[70] Neutra hoped that the plaza landscape would include a "living lungfish, so that one could show it off to the visitors and give them a chance to grasp what this region had been like so long ago."[71] This "prehistoric" landscape was intended to re-establish a lost connection with the past.

The preliminary study for the plaza produced by the Park Service landscape architecture office in March implemented many of these planting ideas. A low planter ran parallel to the front facade of the visitor center; unidentified trees in tubs lined the glass wall of the Fred Harvey building. There was a rectangular planting bed in front of this row of trees and a bench-high planter featuring a specimen sycamore. Across the courtyard, two ginkos sheltered the apartments. The corner nearest the visitor center featured a petrified tree exhibit. To the north, the reflecting pool was supplemented by a Triassic swamp exhibit, a more naturalistic body of water with representative flora. Neutra consulted professors of botany and paleontology at the University of Southern California, the University of California at Los Angeles, and San

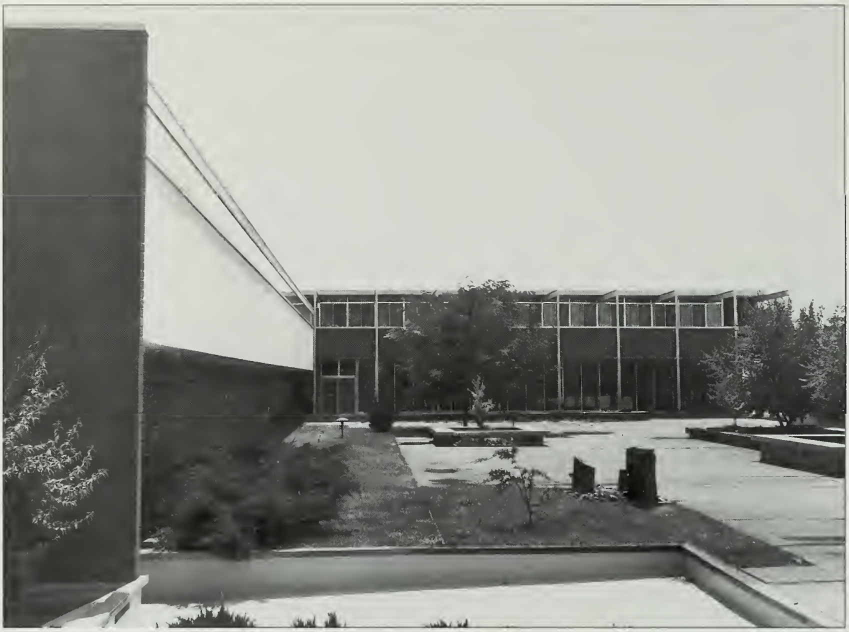


Figure 53. Painted Desert Community, exterior view of Visitor Center and plaza. The pool in the foreground was intended to house the "living lungfish." Photo by Huntsman, July 1969. Courtesy National Park Service Technical Information Center, Denver Service Center.

Jose State College, both to determine his selection of plants and their suitability to the patio environment. After his research, he felt confident that the garden would not require special maintenance. By January 1963, Neutra had discussed the landscaping plans with Volney J. Westley and forwarded recommendations to the regional director, Thomas Allen. Screen planting was an important part of the overall scheme. Plantings south of the entrance road were necessary to block the view of visitor carports; chamisia would be useful in achieving this purpose. From February to April, the Park Service produced additional planting plans, including landscaping of the open area between the residences and the courtyard. Drawings for "the plaza and related areas" included specifications for benches—both wood and stone slab—waste paper baskets, drinking fountains, and planters. Special attention was paid to the texture of surfaces, the pebble-finish concrete of the plaza, and the combed concrete of the raised planters, also used as a transition between the plaza and the community area. Selected riverbed stones filled the flush planters.[72] If used according to plan, the plaza would become an extension of the park's interpretive program, as rangers describing the evolution of the landscape could point to miniature examples growing in the planters outside.

The Painted Desert Community of 1999 bears little resemblance to the pristine white complex completed in 1963. The early years of the Community are fondly remembered by the park's chief of maintenance, Charlene Yazzie, who grew up in unit #213. When the family moved into the new row housing in 1964, Yazzie's father had just begun his thirty-one year career in the park maintenance department. The family enjoyed the benefits of a close-knit neighborhood, with public services such as a post office and public branch library located within the Community. Yazzie and her three brothers and sisters attended elementary school in the same classroom each year, moving up a row of chairs as they advanced through each grade. The children played tennis and basketball in courts behind the school, but also explored the Painted Desert canyons, yards, and community spaces. An unspoken agreement kept them from the visitor and administration areas, except to visit the Fred Harvey popcorn machine. On Friday nights, residents gathered at the community building for movies. Barbecues and other social events were commonplace, and sometimes students performed plays on a stage erected in front of the movie screen. During these early years, every apartment was full, with at least three children to each household. But, beginning in the early 1970s, the families stopped coming and things began to change. There were no longer enough children to require a school. Occupants of the row housing were increasingly transient, usually temporary researchers and seasonal employees. Today, Yazzie works in the offices once occupied by her father. Although many aspects of her job are similar, the emphasis is no longer on maintaining the existing facilities, but on preserving them.[73]

A CASE OF "GROSS NEGLIGENCE": STRUCTURAL PROBLEMS AT THE PAINTED DESERT

One rainy September Sunday in 1962, Inspector Mott noticed some cracks in concrete that had been poured on undisturbed grade. It was a damp day, and since he had "observed a similar condition at Dinosaur Visitor Center," Mott concluded that the earth below the foundation was unstable, perhaps even the bentonite that had so damaged Dinosaur. By January 1963, the park assembled its own specialists, Richard Neutra, and Dean Rasmussen for a final inspection of the Community, Trailer Park, and Maintenance Building. The group discovered enough deficiences in construction to consider a lawsuit. With what must have seemed like astonishing audacity to the Park Service, the Rasmussen Company appealed its contract for the residences, thereby forcing the park to seek damages. On July 8, 1963, Department Counsel Murray Crosse represented the government in a hearing of the "contract appeal case of Rasmussen Construction Company." During this process, Chief

Architect Jerry Riddell and Robert Alexander conducted an inspection, only to find that "all the buildings of the Painted Desert Community have been affected by varying degrees of soil movement," clear evidence of "gross negligence."[74] The problems ranged from blatant failure to follow specifications for reinforcing steel to poor masonry and shoddy workmanship attributed to the many change orders that had resulted from budget cutbacks. In a follow-up report, Alexander advised condemning the buildings because, in the event of an earthquake, "many lives would be in danger of immediate extinction. Even a strong wind, which is common at the site, could topple a patio wall."[75] Riddell suggested immediate legal action against Rasmussen, predicting that the contractor would be "awarded a judgment in his case now pending decision." The Chief Architect was correct in his assumption; the contractors won the appeal.[76]

But the government was hardly willing to concede the case, nor could it afford to absorb such a financial loss. The park used its new proof of structural deficiencies to request a revised settlement. Finally, in August 1964, the Board of Contract Appeals conceded that certain delays and deficiencies were the responsibility of the Rasmussen Company and divided the costs between client and contractor. Throughout this process, Park Service officials continued to perform structural tests; Chief Engineer H. G. Gibbs examined the foundations, and WODC Structural Engineer Lada Kucera analyzed the steel reinforcing.[77] Both mendiscovered problems. In a letter of September 9, 1964, the department counsel asked for a reconsideration of the matter after WODC engineers reported "serious structural damage" in Rasmussen buildings.[78] The government does not appear to have received additional compensation for the problems, which demanded immediate attention and continued management.

The Park Service had gathered extensive evidence of deficiencies in the construction of the Painted Desert for use in the lawsuit and, in the midst of the controversy, began to accept bids for repairing "structural defects in residences at Painted Desert Community." By March 1964, the park was already planning extensive repairs, including remodeling the carports into garages.[79] This work, essentially closing the open shelters with concrete block walls, was not actually begun until about four years later. By then damage had progressed enough to require more radical solutions than patching and plastering. Superintendent Donald A. Drayton took pictures of the damage after the summer rainy season in 1968 and sent them to the regional director along with a plea for help. Even after considering suggestions by Riddell and his office, the Superintendent believed "phased replacement and relocation" of the residences the most viable option. One suggestion from the design office involved a method of surfacing the area around the buildings to prevent moisture from sinking in. However, Dr. Rush, a consultant and geology professor at Northern Arizona University, told Drayton that when bentonite soils were covered in such a way, "a natural moisture pumping action is created," actually drawing the moisture from the outside into the bentonite foundation. After examining the site in 1971, Dames and Moore, consultants in applied earth science, found "no feasible solution to the problem" and predicted that the buildings would eventually have to be abandoned. Five years earlier, Dames and Moore had analyzed the adverse movement caused by the bentonite foundation at the Quarry Visitor Center, Dinosaur National Monument.

In 1973, Superintendent Charles A. Veitl announced changes in the visitor center, "implemented in order to achieve a standard of acceptance more in line with those outlined in the Activity Standards Handbook." These choices would also adjust the focus of interpretation from the country's national parks to the immediate Petrified Forest environment. First, the map locating every national park was replaced by exhibits of petrified wood. Wall panels describing the entire national park system were substituted with a series of illuminated views of sites throughout the park. These were accompanied by exhibit cases containing items from each featured site. The room was carpeted "to obtain a better, more 'lively' appearance and create an atmosphere . . . more conducive to interpretation." When visitation was particularly heavy, Park Service personnel could use a portable desk for souvenir sales, thus leaving the information table for its instructional purpose. Planning for the most significant alteration—the addition of an auditorium to the far end of the visitor center—began in November 1974. The park's orientation movie had been previously shown in the community building. Auditorium "Plan B" was accepted in April and approved working drawings by mid-summer. The construction drawings completed in June show a new end wall erected in the lobby, shortening the space by about one-third. Auditorium equipment, including the projection booth, appears to have been installed in the storage closets.[80] In 1979 a new front entrance vestibule was constructed. As built, the front facade of the visitor center featured floor-to-ceiling windows and glass double doors facing the parking lot. Today, visitors enter from the courtyard side and pass through the original front door to reach the lobby. The glassed-in entrance vestibule was intended to conserve energy and "to improve foot traffic control," but it also minimizes the focus on the visitor center building.[81] Whereas visitors originally saw only the doors to the visitor center as they approached the complex, in 2000 the entrance to the Fred Harvey building is more prominent.[82]

In March 1976, Superintendent David B. Ames requested that Fred Harvey, Inc., conform to the park's new color scheme. By June, all buildings were to be painted "cliff brown" with "tobacco brown" trim, including the Texaco station.[83] During the spring and summer of 1977 the park made further "improvements," reroofing the buildings and quarters and rehabilitating the houses. Citing lack of insulation as a problem during the winter, the park installed a Franklin stove in one unit as a test until further funds were approved. Carpeting was added both for insulation and to cover the linoleum floors cracked due to the moving bentonite foundation.

In 2000, the plan of the Painted Desert Community remains much as it was in 1963. All of the buildings are extant and the general circulation pattern remains intact. However, since the 1960s, changes have been made that, when taken together, significantly alter the aesthetics of the place. Although much of the remodeling was done to repair faulty construction, the methods of solving structural problems often evolved into aesthetic issues. For example, perhaps in an effort to cut down on glare, residential strip windows extending from wall to wall were reduced to standard rectangular windows. These rooms were once illuminated by a dramatic stripe of light; today, they are dark and oppressive. The open mudrooms, left unroofed so that laundry would dry quickly, are now covered over; if useful for storage, the enclosures diminish patio space and block additional light. Flat roofs—once the unifying feature of the entire complex—are now sometimes slanting, sometimes raised in zigzag profile. Flimsy metal rods with curling decorations have replaced the smooth metal poles supporting the covered walkways in front of the residences. The community building's aluminum roll down door has disappeared, leaving featureless wall in its place. Wood paneling covers much of the Fred Harvey building's once shimmering glass wall. One of the tiled columns is actually enclosed within a courtyard entrance vestibule. Although many of these alterations clearly originated out of functional needs, such as drainage and sun and wind protection, the chosen solutions also incorporated the aesthetic preferences of the day. In other circumstances, such decisions would hardly be worthy of mention, but at the Painted Desert Community, where every element reinforces a modernist aesthetic, these "domesticating" alterations might as well be Queen Anne turrets or classical pediments.

The Painted Desert Community was an experiment for the Park Service. If appropriate for the late 1950s, when Mission 66 promised a new park experience, the complex was too modern for the next generation. In the 1970s, changes were made to make the buildings seem warmer and more homey. Today, visitors might prefer the aesthetics of the original structure, with its brilliant colors, bare concrete, and sparkling chrome. Or, perhaps, they would rather return to the rustic Painted Desert Inn, the nearby historic concession building considered a liability during the Mission 66 program. Located less than a mile apart, these buildings were each the center of visitor services during their respective eras. Today the 1930s inn and the Painted Desert Community illustrate the challenge of contemporary historic preservation.

ENDNOTES

[1] Richard J. Neutra to Thomas J. Allen, "Rough Draft of letter," January 25, 1963, Petrified Forest National Park (PEFO) archives.

[2] The Painted Desert Inn suffered from severe structural problems. A 1960 "master plan" drawing noted that it would either be adapted or replaced by an interpretive center on the same site. In an earlier memorandum to the Director, Harthon L. Bill commented that "with MISSION 66 at Petrified Forest it has been anticipated that this structure would be evacuated by the concessioner and that as a temporary expedient the structure could be utilized for interpretive exhibits." See "Structural Inspection, Painted Desert Inn, Petrified Forest," memorandum, Harthon L. Bill to Conrad Wirth, September 3, 1958. In 1998 the Inn was open and undergoing renovation.

[3] Laura Soulliere Harrison, "Painted Desert Inn," National Register of Historic Places inventory form in *Architecture in the Parks* (National Park Service, 1986); Jeffrey F. Burton, *Days in the Painted Desert and the Petrified Forests of Northern Arizona* (National Park Service: Western Archeological and Conservation Center, 1993), 29-30.

[4] Wright's project, "Meteor Crater Inn for Burton Tremaine" is pictured in *Frank Lloyd Wright Monograph, 1942-1950*, Yukio Futagawa, ed. (Tokyo: ADA Edita, 1988). A scrapbook in the office of Meteor Crater Enterprises, Inc., contains an article from the June 25, 1959, *Mojave Miner* (Kingman) with mention of Philip Johnson's design.

[5] Several books on Johnson neglect to mention the Meteor Crater Museum. According to *Philip Johnson, Architecture 1949-1965* (New York: Holt, Rinehart and Winston, 1966) the Meteor Crater Pavilion designed by the architect in 1950 has been destroyed. Since concessions and services have been expanded, it is unclear whether the extant museum building was designed by Johnson.

[6] Richard Neutra, "Housing in Mild Climates," *Progressive Architecture* (October 1953); Neutra, *Mystery and Realities of the Site* (Scarsdale, New York: Morgan & Morgan, Publishers, 1951).

[7] *Annual Report of the Department of the Interior*, 1957, PEFO archives.

[8] See the following drawings on microfiche in the Technical Information Center (TIC), Denver Service Center (DSC): "Addition to Museum and Administration Building," Rainbow Forest, #2047-A; "Addition to Visitor Center," 2047-B; "Addition to Visitor Center" (working drawing), 2047-C.

[9] Assistant Director Stratton to Superintendent, memorandum, September 7, 1962.

[10] "News Media Fact Sheet, Dedication of Petrified Forest National Park and New Visitor Facilities," October 27, 1963, PEFO archives.

[11] Superintendent's Monthly Report (Fred C. Fagergren), November 9, 1956, PEFO archives.

[12] "Proposed Layout, Headquarters, Painted Desert," #3206 (6-10-57); microfiche, TIC.

[13] "Employee Residences, Painted Desert Residential Area," #3208 (7-12-97), 2 sheets, TIC.

[14] Drawings prepared and designed by Doty, "Residential and Utility Area," #3212 (2-12-58), TIC.

[15] Superintendent's Monthly Report, May 9, 1958, PEFO archives.

[16] Superintendent's Monthly Report, May 9, 1958, PEFO archives.

[17] "Drawings for Headquarters Development, Petrified Forest," memorandum, Thomas C. Vint to Chief, WODC, May 9, 1958. Vint also mentioned an attached sketch,

which was "not an attempt to design the development but is to be taken more as an indication of general distribution of facilities in the area."

[18] Richard J. Neutra and Robert E. Alexander, "Homes for National Park Service Families on a Wind-Swept Desert," n.d., Rare Book and Manuscripts Collections, Carl A. Kroch Library, Cornell University Library, Ithaca, New York. Some of the drawings used in the text are dated May 15, 1958.

[19] The landscape architectural branch of WODC produced a new plan after February 1958 in response to Neutra and Alexander's preliminary drawings. This layout flips the location of administration and concession buildings and locates the employee apartments to the north of the visitor center. During the December conference, this alternative was abandoned and the previous plan reinstated. See "Painted Desert Region, Part of the Master Plan," #3202-D, TIC.

[20] "Painted Desert Preliminary Plan Discussion, Los Angeles, December 19," memorandum, Superintendent to Regional Director, Region Three, December 23, 1958.

[21] Jerome C. Miller and K.M. Saunders met with the architects in their office on December 12 and made the following alterations in building size: administration-orientation building and covered corridor reduced from 11,000 to 8,880 square feet; maintenance structure and vehicle storage shed reduced from 15,350 to 10,600 square feet. The eight apartment units remained 4,000 square feet. Total reduction amounted to 6,870 square feet. See "Painted Desert Preliminary Plan Discussion."

[22] "Work Schedule—Painted Desert, Petrified Forest," memorandum, Hugh M. Miller, Regional Director to Director, March 6, 1959.

[23] "Work Schedule, Painted Desert, Petrified Forest," memorandum, Director to Chief, WODC, February 17, 1959; "Petrified Forest NM—Painted Desert Development Construction Funds as Now Available or Programmed," January 16, 1959.

[24] Sanford Hill to Regional Director, Region Three, "Los Angeles Meeting, Painted Desert Headquarters—Petrified Forest," memorandum, December 24, 1958.

[25] "College Buildings: St. John's, Science and Art in a Venerable Setting," *Architectural Record*, vol. 126, no. 3 (September 1959): 176-179.

[26] Hines, *Richard Neutra*, 236.

[27] John Rollow, for Richard Neutra and Robert Alexander, to Fred Fagergren, November 29, 1961.

[28] *National Geographic*, vol. 120, no. 6 (December 1961): 882-885.

[29] "Architect Richard Neutra, What Will the Neighbors Think?" *Time*, vol. 54, no. 7 (August 15, 1949).

[30] Superintendent's Monthly Report, October 3, 1958; "Part II, More Livable Homes, Bold New Plan for Best Land Use," *Life*, vol. 24, no. 12 (September 22, 1958). Fagergren may not have known that the *Life* magazine with Neutra's picture on the cover (1949) included two pages of "Modern Houses across the U.S." with examples by Stone, Wright, Gropius and others. The article singled out Neutra for special praise.

[31] Edward Durell Stone, *The Evolution of an Architect* (New York: Horizon Press, 1962), 148-149.

[32] Superintendent's Monthly Report, March 14, 1960.

[33] "New Standard Plans for Permanent Employee Housing," memorandum, Director Wirth to Regional Directors, Chiefs, EODC and WODC; Superintendent, National Capital Parks (NCP), February 17, 1960.

[34] "New Standard Plans for Permanent Employee Housing," memorandum, Sanford Hill to Regional Director, March 3, 1960; attachments: floorplans and "Selective Components for NPS Standard House Plans."

[35] "Justification for Exceeding Cost Limitation, Single-Unit Employee Housing, Petrified Forest NM," memorandum, Sanford Hill to Fred C. Fagergren, March 11, 1960; "Employee Housing Construction Cost Limitation," memorandum, Fred C. Fagergren to Sanford Hill, March 21, 1960.

[36] "Painted Desert Housing Plans," memorandum, Fred C. Fagergren to Regional Director, Region Three, April 21, 1960.

[37] "Painted Desert Housing Plans," memorandum, Jerome C. Miller to Fred C. Fagergren, May 3, 1960.

[38] Sanford Hill to Richard J. Neutra and Robert E. Alexander, February 29, 1960.

[39] "Typical Floor Plans, Housing," Neutra and Alexander, January 9, 1959, microfiche, TIC.

[40] Sanford Hill to Richard J. Neutra and Robert E. Alexander, April 6, 1960.

[41] Fred C. Fagergren to Sanford Hill, April 11, 1960.

[42] Neutra and Alexander's "as constructed" drawings are dated January 31, 1961. Consultants on the project were Boris M. Lemos, mechanical engineer, and Parker, Zehnder and Associates, structural engineers, both of Los Angeles. The Park Service revised the drawings in May 1967.

[43] "Residential: Award Citation," *Progressive Architecture* (January 1959), 146-147.

[44] Superintendent's Monthly Report, May 10, 1961.

[45] The Stratton Company of Hurricane, Utah, also worked on this contract.

[46] Dion Neutra to Fred C. Fagergren, June 13, 1961.

[47] This chapter is based on two year's worth of "inspector's weekly construction reports" filed between April 1, 1961, and April 27, 1963. See PEFO archives.

[48] Harry J. Mills to Fred C. Fagergren, March 9, 1962.

[49] Fred C. Fagergren to Dean Rasmussen, August 23, 1962; John Rollow to Fred Fagergren, August 17, 1962.

[50] Fred C. Fagergren to Harry J. Mills, June 4, 1962.

[51] "Occupancy of New Headquarters Building," memorandum, Fred C. Fagergren to Regional Director, Southwest Region, July 18, 1962. PEFO archives.

[52] "Open House Coincides with 'Founders Day' at Painted Desert Reception Center," *Holbrook Tribune* (August 17, 1962).

[53] "Painted Desert Reception Center," Marc Sagan and Edward J. Bierly, Branch of Museums, Washington, February 4, 1960.

[54] The monument was authorized to become a park when Eisenhower signed legislation on March 28, 1958, but the designation was delayed until the government gained title of private lands. See Lubick, "Petrified Forest National Park," 137.

[55] Stratton to Fred C. Fagergren, September 7, 1962.

[56] John Rollow to Fred Fagergren, July 27, 1961.

[57] John Rollow to Fred C. Fagergren, November 28, 1961.

[58] John Rollow to Fred C. Fagergren, May 2, 1962.

[59] Superintendent's Monthly Report, April 13, 1962.

[60] Fred C. Fagergren to Dean Rasmussen, February, 1962.

[61] Fred C. Fagergren to Dean Rasmussen, October 23, 1962.

[62] "Color Schedule Painted Desert Community," Neutra and Alexander, May 7, 1962, PEFO archives.

[63] "Suggestions from Mr. Richard J. Neutra regarding residences," ca. January 26, 1963.

[64] Richard Neutra to Thomas J. Allen, "Rough Draft," January 25, 1963.

[65] A plan for the "Proposed School" by the WODC dated February, 1962, shows the footprint of the school building and the proposed play area with baseball diamond and tennis court. See drawing #3236, TIC, DSC.

[66] Alexander took on the project after the dissolution of the partnership.

[67] A "Bob Petley Postcard," published by Petley Studios, Inc. of Albuquerque, New Mexico, featured "Painted Desert Northern Arizona" in an "aerial view showing the visitors center and the vast Painted Desert." The undated card is in the collection of Rita Garcia, Petrified Forest, National Park.

[68] "Petrified Forest National Park, Arizona," brochure accompanying dedication material, n.d., PEFO archives.

[69] Richard Neutra to Thomas J. Allen, "rough draft," January 25, 1963.

[70] Fred C. Fagergren to Chief, WODC, February 21, 1962; Richard Neutra to Fred C. Fagergren and Philip F. Van Cleave, chief park naturalist, February 17, 1962.

[71] Richard Neutra, *Life and Shape* (New York: Van Rees Press, 1962), 338-343.

[72] See the following drawings located in the Technical Information Center, "General Plan, Painted Desert Plaza," March 1962; "Plaza and Related Areas, Painted Desert Community," March 1963; "Planting Trees and Periphery," April 1963.

[73] Interview with Charlene Yazzie, chief of maintenance, by the author, Petrified Forest National Park, July 31, 1998.

[74] Jerry A. Riddell to Chief, WODC, "Inspection of buildings at Painted Desert Community," July 30, 1964.

[75] Robert E. Alexander, "Report on Petrified Forest Installation," July 22, 1964; Robert Alexander to Sanford Hill, July 24, 1964, PEFO archives.

[76] The Petrified Forest archives contain extensive records relating to the lawsuit.

[77] H. G. Gibbs, "Inspection of damage and foundation movements at Painted Desert Community," travel report, August 24, 1964; L. Kucera, "Investigation of Structural Failures of Block Walls," ca. August, 1964.

[78] Murray L. Crosse to Chairman, Board of Contract Appeals, memorandum, ca. September 8, 1964.

[79] "Remodeling Carports to Garages," WODC, #3310, March, 1964, TIC.

[80] See "Alterations to Lobby," Western Regional Office, #80005, TIC. The community room was remodeled at this time and the "large metal door removed and the area enclosed." Charles A. Veitl, Superintendent's Annual Report, 1973.

[81] Roger K. Rector, Superintendent's Annual Report, 1979.

[82] The present entrance to the Fred Harvey building was not part of the Neutra/Alexander design. Originally, visitors saw only the entrance to the visitor center from the parking lot, and could only enter the concession building from within the courtyard. The new entrance was installed at an unknown date.

[83] David B. Ames to Manager, Texaco, Inc., March 18, 1976.

CHAPTER 5

ADMINISTRATION BUILDING (HEADQUARTERS; BEAVER MEADOWS VISITOR CENTER)

ROCKY MOUNTAIN NATIONAL PARK, ESTES PARK, COLORADO

On Friday July 16, 1965, Rocky Mountain National Park celebrated its fiftieth anniversary with the dedication of the Alpine Visitor Center at Fall River Pass, the first Mission 66 visitor center constructed in the park.[1] The location of the building was more impressive than its architecture. Visitors climbed Trail Ridge Road, the country's highest continuous highway, and were suddenly confronted with a modern visitor center in the forbidding tundra landscape 11,796 feet above sea level. Built of stone and concrete, with a shingled gabled roof and log beams, the simple building featured a glassed-in viewing area overlooking Chapin Creek and the Mummy Range. After the grand opening celebration, participants traveled back down the road and gathered at Beaver Meadows for an afternoon ground-breaking ceremony. The site was a meadow just up the hill from the utility area along the new road to the Beaver Meadows entrance station. George B. Hartzog, Jr., director of the National Park Service, local dignitaries, and Charles Gordon Lee of Taliesin Associated Architects witnessed Colorado Congressman Wayne Aspinall dig a few shovelfuls of dirt in honor of the future Administration Building.[2] Although Mission 66 officially concluded the next year, the development campaign it inspired continued until the end of the decade at Rocky Mountain with the construction of the Administration Building, commonly known as the Headquarters (1965-1967) at Beaver Meadows and the West Side Administration Building (1967-1968, later Kawuneeche Visitor Center) near Grand Lake. Together, these visitor centers represent the culmination of a decade of planning and designing modern visitor facilities. As one of the final buildings by a private firm, the Headquarters demonstrates the Park Service's continued eagerness to experiment with modern architecture in the parks and to engage in risky collaboration with well-known modernist designers. The Park Service commissioned Taliesin Associated Architects, Ltd., to design the Headquarters at Beaver Meadows, knowing that these devoted followers of Frank Lloyd Wright could only design an exceptional building.

Rocky Mountain drafted its Mission 66 planning prospectus in 1956 amid the excitement of a 320-acre park boundary extension and news of a new eastern approach road.[3] President Eisenhower authorized the addition to the eastern park boundary in June. The two-and-a-third mile approach road, a project first conceived in 1932, connected State Highway 262 with Trail Ridge Road, traversing an area known as Beaver Meadows. According to this plan, the new visitor center would be located on undeveloped land in Lone Pine Meadow just below the turnoff for Moraine Park. Park Service designers envisioned a "principal visitor center" adjacent the new road with facilities for both visitors and staff. The building was to house interpretive exhibits, an enclosed, glassed-in observation porch, and the information/orientation services currently handled at the entrance station. Indoor and outdoor auditoriums would supplement the museum interpretation. The cost of the new visitor center was estimated at $200,000.[4] This initial Mission 66 development proposal also included provisions for the expansion of a one-room facility at Fall River Pass jointly owned by a concessioner and the park. Thousands of people stopped in this area every day, but the building could only accommodate thirty at most. A new facility would provide concessions and interpretation relevant to the alpine setting. On the west side, similar services would be offered at "Grand Lake Visitor Center." Trailers equipped with information and exhibits were stationed at Rainbow Curve on Trail Ridge Road and Lake Granby Overlook off Highway 34 to determine the value of permanent visitor facilities in these areas.[5]

By 1958, planners were considering several alternatives for park development, all of which anticipated major changes in roads and traffic patterns around the eastern entrance. One possibility was a visitor center at Deer Ridge near the convergence of Highways 34 and 36. Since the Beaver Meadows entrance and the Fall River entrance guarded these primary access roads into the park, a visitor center between the two would serve the greatest number of visitors. However, because the chosen site included several inholdings, such as the Schubert family's popular Deer Ridge Chalet, acquisition of the property before the conclusion of Mission 66 was doubtful. A description of the proposed building mentioned standard visitor center components: a lobby, exhibit space, and audio-visual room. Significant architectural features included an elevated penthouse and viewing terraces, both of which related to the interpretation of glacial geology. In this scenario, the park headquarters building was to be located near the utility area, south of High Drive, and devoted exclusively to park administration. In the interim before the Deer Ridge Visitor Center was completed, visitor services could be offered from a nearby auditorium building. Although this plan was not adopted, efforts to acquire the desired property were eventually successful.[6]

A more expedient alternative, considering the land ownership situation, was the construction of a visitor center building at Lone Pine, the site suggested two years earlier. This proposal described a 10,200-square-foot building for visitor facilities, which included an optional auditorium and naturalist's operating headquarters and workshop. A headquarters for administrative functions was planned about a mile down the road. At this time, planners imagined the administration building in conjunction with the utility area and distinct from anything having to do with visitors or interpretation. This "master plan development outline" was reviewed by Lyle Bennett, WODC architect, and recommended by Chief of Design and Construction Thomas Vint in 1958. During the master planning process, the park was also considering a visitor center at the Grand Lake entrance. In April 1958, Cecil Doty submitted a prototypical Mission 66 design for what would later become known as both the West Side and Kawuneeche Visitor Center. The most prominent feature of the proposed wood frame building was a flagstone porch; the restrooms on the left side of the building extended to the edge of the porch, while an administration wing on the right was flush to the lobby entrance. Porch flagstones continued inside the lobby. Directly behind the lobby was an audio-visual room and to the left, an exhibit room. The visitor center constructed nearly ten years later would only resemble Doty's drawing in its adherence to programmatic requirements.[7]

The new eastern approach road opened in 1959 but the Thompson River entrance remained in use until 1960, when the Bear Lake cut-off was completed and the old entrance closed. Park planners predicted that the new entrance would result in increased use of the Moraine Museum, a former lodge constructed in the early 1920s. The museum's centralized site was viewed as more important than the rustic building, which could "be razed and replaced by a modern, fireproof structure with space-heating for all-year operation if required." In its place, the park envisioned a two-room exhibit facility, an overlook porch equipped with audio-visual equipment, a lobby and information desk, restrooms, and a few small offices. Although the Moraine Museum was spared, as Mission 66 planning progressed, the Park Service increased efforts to acquire inholdings, remove old buildings, and restore the natural landscape as much as possible. Between 1958 and 1962, the park purchased Fern Lake, Bear Lake, and Spragues Lodges; two private "guest ranches," the Fall River Lodge in Horseshoe Park and the Brinwood Hotel in Moraine Park; and the Stead Ranch at Moraine Park, site of the Deer Ridge Chalet.[8] The buildings were demolished in the name of wilderness conservation, but many Estes Park residents and seasonal visitors lamented the loss of favorite vacation resorts. To complicate matters, the park's environmental preservation efforts were carried out just a few years after a controversial new ski facility opened at Hidden Valley. In light of the effort to remove private development and thereby enhance the natural surroundings, the Park Service ski concession was questioned by both locals and environmentalists.

While other parks upgraded concessioner facilities inside their boundaries, Rocky Mountain was able to take advantage of its proximity to Estes Park for visitor accommodations and most services. This close relationship between the park and the town dated back to the park's founding in 1915, when a rented downtown building became the first headquarters. In 1921, the Estes Park Women's Club resolved to loan a parcel of land in town to the park, and once an act of Congress passed the bill, a superintendent's office was constructed on the city lot about three miles from the park boundary.[9] During the Mission 66 development and planning process, maintaining good relations with the town was of considerable importance. Superintendent Granville Liles understood that the design of the new visitor center should reflect the close ties between the park and the community of Estes Park.

During the first four years of Mission 66, Rocky Mountain spent over three million dollars on improvements, but had seemingly little to show for it; a large portion of the budget went towards "invisible" repairs, such as updating sewage and water systems. The summer of 1960 brought the first Mission 66 structure, the Beaver Meadows Entrance Station, as well as enlarged campgrounds at Endovalley and Glacier Basin, complete with "lecture amphitheaters."[10] Road repairs, turn-outs, and additional roads were under construction. But the featured visitor centers existed only on paper, as Park Service architects and planners continued to discuss visitor circulation, building location, and other issues crucial to the park's preservation and use.

The earliest extant graphic representation of the proposed east side "Administration and Visitor Orientation Building" is a November 1962 site plan by the Midwest Regional Office.[11] The drawing shows a building shaped like an angular polywog, its head to the west and crooked tail behind. Visitor parking is located on the south side, visitors entered the "head" of the building, and employee parking is provided in the rear adjacent to a central service yard. Because the road separates the new building from the utility area, the scheme did not allow efficient traffic flow. In an effort to remedy this problem, the office drafted a revised plan with a bridge over the entrance road linking the visitor center, to the south, with an administration building on the north side. The next month, a third scheme reunited the two functions in a U-shaped plan south of the entrance road, the side adjacent the utility area. The lobby and auditorium were located at the front and formed the widest section, with narrower central and eastern administration wings. Parking was divided—visitors in front of the building and employees on the east side. During this preliminary design phase, Cecil Doty drew elevations and plans for his version of the future administration building.[12]

Although the "pre-preliminary designs" Doty produced in February 1963 hardly resemble the final building, they anticipate several of its main qualities. The entrance facade of Doty's Administration Building features a single-story office wing, with a double-height auditorium and lobby on one end balanced by the south wall of an additional two-story office wing on the other. Employee parking is on the west side, and from this vantage point, the building appears to be two stories. Visitor services are located in the east end of the building, a segregation of visitor center and administrative functions that foreshadows Taliesin's treatment of visitor and employee use. On the exterior of his administration building, Doty imagined "cement block, stucco and precast panels with heavy exposed aggregate." The office windows were a seemingly continuous strip of glass with thin metal mullions spaced every four feet, and roofs were flat. The Doty scheme was dominated by its extensive office wing and might have seemed equally appropriate in either an industrial or wilderness park.

The park and WODC were not willing to accept Doty's plans without exploring additional possibilities for the new building. In April 1963, a Park Service architect named Roberson produced an "advance study plan for review and adjustment." This simple line drawing shows the first and second floors, and, in general outline, resembles the "polywog" plan of two months earlier. A partition separates the audio-visual auditorium from a lobby and exhibit space which together form roughly an oval shape. The administrative offices are arranged on either side of a corridor that emerges from the rear of the lobby. This 110-foot wing is joined to a 96-foot wing angled slightly towards the front of the building. Although the drawing is crude and the plan awkward, the general organization of spaces and hierarchy of services foreshadow those of the constructed building. During this time the facility came to be known as the administration or administration-orientation building (in the Headquarters area), perhaps to distinguish it from previous schemes involving two separate buildings.[13]

Park Service personnel were still discussing the building's location in February 1964. That summer, William Wesley Peters and Edmund Thomas Casey of Taliesin Associated Architects visited the park to examine potential sites.[14] According to Casey, the firm was contacted by Secretary of the Interior Stewart L. Udall regarding design of a future Rocky Mountain Park headquarters.[15] The basic programmatic requirements were outlined by Superintendent Liles, and Taliesin was asked for advice regarding the building site. As resident landscape architect Richard Strait recalls, the park staff had focused the search for an appropriate visitor center site on Horseshoe Park or Deer Ridge, the site of the controversial private lodge and cabins.[16] Both sites posed circulation problems, however, and the cramped spaces were considered inadequate. Strait and the park planners preferred a building on the north side of the road, which would provide better traffic flow. When Casey arrived, the choice had been narrowed down to two locations, the one ultimately selected and another about a mile further into the park on the north side of the road. The latter site was finally rejected as less conveniently situated in relation to the residential area, and therefore a potential source of traffic problems. At the lower hillside site, the architects could envision a better segregation of visitors and administrative facilities. Although Strait and the park staff were not eager to build "on the wrong side of the road," they agreed that this was the best solution considering the many issues involved. In combination with the building's unusual design, these early planning studies gave rise to rumors that the two-story south facade, as eventually built, had been originally designed to face north. In fact, the building was designed and built specifically for the hillside site it occupies.[17]

During these early discussions, Casey remembers the superintendent's eagerness to improve the relationship between the park and the town of Estes Park. The superintendent hoped that a new headquarters closer to town might reduce some of the tension caused by the park's policy toward inholdings. As primary representative of the client, Liles not only influenced the location of the building, but also the development of its program. His hope that the auditorium might be used for city council meetings and other civic events materialized in the form of a larger theater space that included a cozy fireplace. In September 1964, the *Estes Park Trail* announced that, after five years of planning, the park had finally chosen a site for the building "such that it will serve visitors of the Estes Park area without requiring them to enter the National Park itself."[18] Rocky Mountain was one of the few parks that chose to build a Mission 66 visitor center outside its official entrance, enabling visitors to use the building without passing through a gate or paying a fee.

FRANK LLOYD WRIGHT AND TALIESIN ASSOCIATED ARCHITECTS, LTD.

When Secretary of the Interior Udall called on Taliesin Associated Architects in 1964, the firm's founder, Frank Lloyd Wright, had been dead for five years. The most influential American architect of the 20th century, Wright left behind an architectural legacy unsurpassed in its range and influence—from homes on the prairie to urban office buildings, Southern California residences to New York's Guggenheim Museum. Wright inspired generations of modern architects to design buildings sensitive to site, climate, and regional associations. He taught countless young designers by example, through his built work, but also at the Taliesin Fellowship, the architecture school he founded in 1932. During his career, Wright incorporated history, art, poetry, music, and whimsy into designs for about a thousand buildings. Perhaps more effectively than any architect in the world, he achieved the delicate balance between contemporary innovations and centuries of tradition.

Wright built the house he called Taliesin in 1911 on family property in Spring Green, Wisconsin. Taliesin means "shining brow" in Welsh and refers to the siting of the building on the brow of a hill. For Wright, whose mother was Welsh, the name also invoked Taliesin, the legendary bard of Welsh folklore. Taliesin stood on the brow of a hill near the Hillside Home School, an institution Wright had designed for two aunts nearly ten years before. Early life in the house was a series of tragedies: two fires, the murder of Wright's mistress, and an unhappy second marriage that almost cost him the homestead. Finally, in 1928, Wright brought his third wife, daughter and step-daughter to live at Taliesin. As the country entered the Depression, Frank and Olgivanna Wright found themselves with "everything but money," and turned to the employment that had sustained the two spinster aunts. The school they established, the Taliesin Fellowship, occupied the remodeled quarters of the Hillside Home School and adopted the aunts' radical educational philosophy of learning through hands-on experience. Among the applicants for enrollment when the school first opened in 1932 was William Wesley Peters, who would go on to marry Wright's adopted daughter and become the principal of Taliesin Associated Architects. As Peters and his fellow apprentices soon learned, membership in the fellowship involved more than mastering lessons at the drafting table. Apprentices were expected to perform manual labor around the farm, prepare meals, and engage in other tasks necessary for the maintenance of the school. They also participated in social events, such as a daily tea and periodic celebrations requiring exotic costumes and often exhausting preparations.

The fellowship life of daily chores, architectural instruction, and social events was broadened in 1937-38, when Wright began planning a branch of his school in Arizona. Taliesin West was inspired by a temporary desert camp called Ocatilla that Wright had designed in 1929 while working on a project for a resort in Chandler, Arizona. Once the complex was under construction in 1938, the fellowship migrated between the two locations, living in lush Midwestern farmland during the hot summer months and in the temperate desert through the winter. This seasonal routine of dramatic environmental contrasts suited Wright personally. He expressed this satisfaction in the architecture of the schools, both of which were constantly altered and remodeled as inspiration and reason demanded.[19] The intense life of the fellowship, with it hands-on training and rigorous social obligations, imbued devoted students with the design philosophy, if not ability, of their mentor. The Taliesin apprentices who worked on the Rocky Mountains Headquarters not only learned from Wright's method, but also from their experience at his desert retreat, Taliesin West.

Wright established the Frank Lloyd Wright Foundation in 1940 to guarantee that his "intellectual property" would remain within the fellowship. Upon his death in 1959, this governing body became responsible for the future organization of the school. The core of loyal apprentices, or senior fellows, who decided to carry on Wright's work,

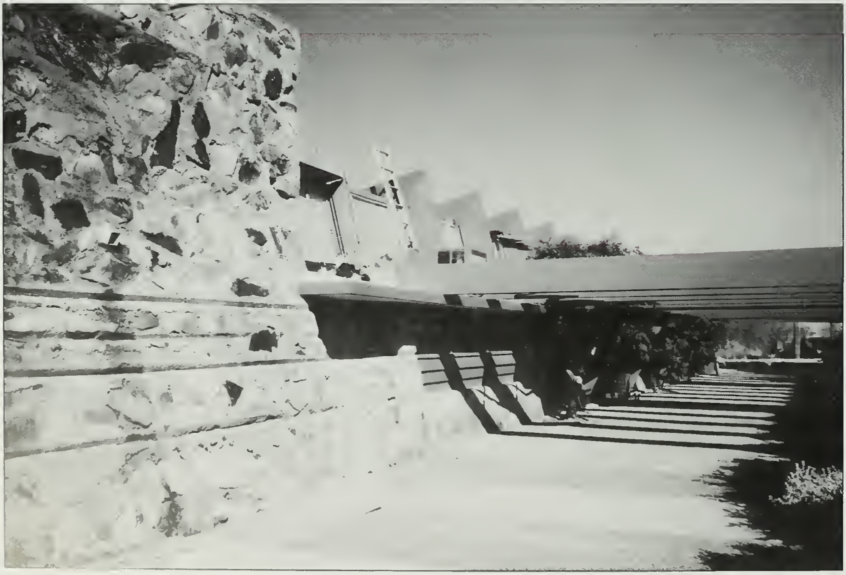


Figure 54. Taliesin West, Scottsdale, Arizona, 1998. Photo by author.

were organized as Taliesin Associated Architects. Although maintaining the Taliesin farm proved to be more then it could handle, the architectural firm remained committed to the "learning by doing" philosophy so important to Frank Lloyd Wright. The Foundation established standards for a new school, the Frank Lloyd Wright School of Architecture, and received its professional accreditation in 1996. Wright's belief in the apprenticeship system was carried on through a close relationship between the architectural firm and the school, which share a single drafting room and a dedication to Wrightian design principles.[20] Students work for the firm as part of their learning experience. The school continues the traditional annual migration between Scottsdale and Spring Green. In 2000, Taliesin Associated Architects maintains these two offices, as well as offices in Madison, Wisconsin, Bradenton, Florida, and Hermitage, Tennessee. Eight of the fourteen principles remember life under Wright, and most were exposed to the philosophy of his chief apprentice, William Wesley Peters.[21]

After the loss of their mentor, the senior fellows looked to Wes Peters for leadership. As managing principal of Taliesin Associated Architects, Peters was responsible for overseeing all projects and, at Wright's death, that meant completing unfinished work. Project architect Tom Casey recalls counting eighty-five ongoing projects, including the Guggenheim Museum, Beth Shalom Synagogue, and Marin County Center. Wright's continuing legacy is perhaps best illustrated by Monona Terrace, a lakeside convention building and community center on axis with the state capitol building in Madison, Wisconsin. The commission came to Wright's drawing board in 1938, and, with the help of the apprentices, he revised the complex several times over the next thirty years; the convention building was finally completed by Taliesin Associated Architects in 1997. By the early sixties, the architectural firm was not only continuing work begun during Wright's lifetime, but taking on new commissions as well.[22]

Taliesin Associated Architects received the headquarters building contract July 1, 1964, just a few weeks after the preliminary site visit. Over the next few months, Peters and Casey met with park architects and planners to discuss the project. At a meeting on September 24 WODC Chief Sanford Hill, John Cabot, chief architect of the Washington office, and architect Jerry Riddell discussed the proposed building with Taliesin and agreed on a schedule for completing the plans. The park staff was already reviewing "revisions of the floor plan requirements for the new Headquarters Administration Building," and by the next month they were examining preliminary drawings and submitting comments to the regional director. In-house architects were involved in floor plan revisions.

When local papers learned that Taliesin Associated Architects would be designing the new headquarters, stories began to appear about Frank Lloyd Wright's previous commission for a hotel in the park. According to the *Estes Park Trail* and the *Rocky Mountain News*, Wright designed the Horseshoe Inn for W. H. Ashton, who operated the hotel until 1915.[23] The Park Service purchased the building from new owners in 1932 specifically to destroy it. Reporters couldn't resist mentioning the demolished Horseshoe Inn as a precedent Frank Lloyd Wright building. In fact, Wright's design for an expensive luxury hotel with room for a hundred guests is a formal complex of buildings that bears little resemblance to the two-story wood frame structure actually constructed. The front page of the 1908 *Estes Park Mountaineer* featured the design by "Frank Lloyd Wright, the famous architect of Chicago." The building's Wrightian characteristics are apparent in the accompanying description:

> The scheme of the building is a large dining room and living room, separated only by a wide chimney with a large fireplace on both sides. Around the two rooms will be a balcony looking down into these rooms. From these two rooms, which form the central part of the building, wings will run both ways, ending in towers two stories high. The guest rooms will be in the wings, and all will have large windows commanding a view of the mountains. One of the wings will span a little stream, and the music of the waters splashing over the rocks beneath the window, ought to lull to rest the tired tourist after a day of mountain climbing. The ground between the main building and towers at the end of the wings will be made into an open court, and in pleasant weather will be used as an outdoor dining room.[24]

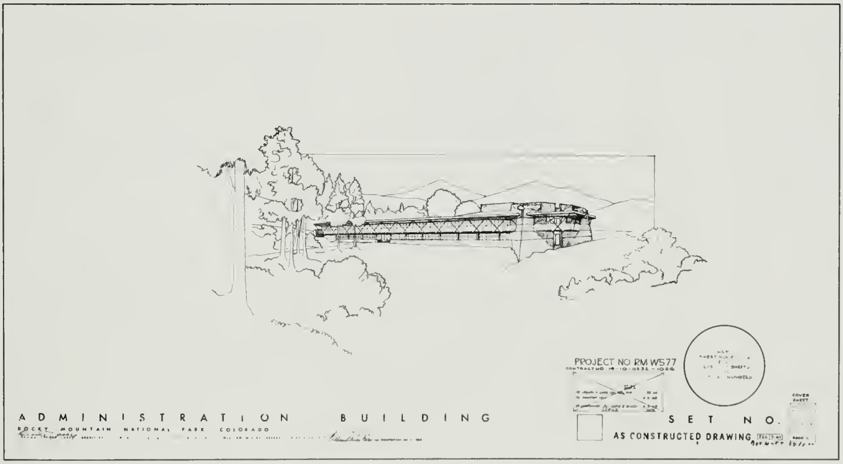
The emphasis on a central hearth, the split level arrangement, and segregation of community spaces and guest rooms in this proposed design are typical of Wright's work. Throughout his career, Wright used ceiling heights to distinguish between intimate spaces and expansive, double-height gathering places, such as theaters or living rooms. Open courts become outdoor rooms, and indoors appears to flow outside. If only in project form, the Horseshoe Inn suggests Wright was thinking about natural water features entering the building site as early as 1908.[25] Unfortunately, the hotel known as Horseshoe Inn, as built, had nothing to do with Wright's design.

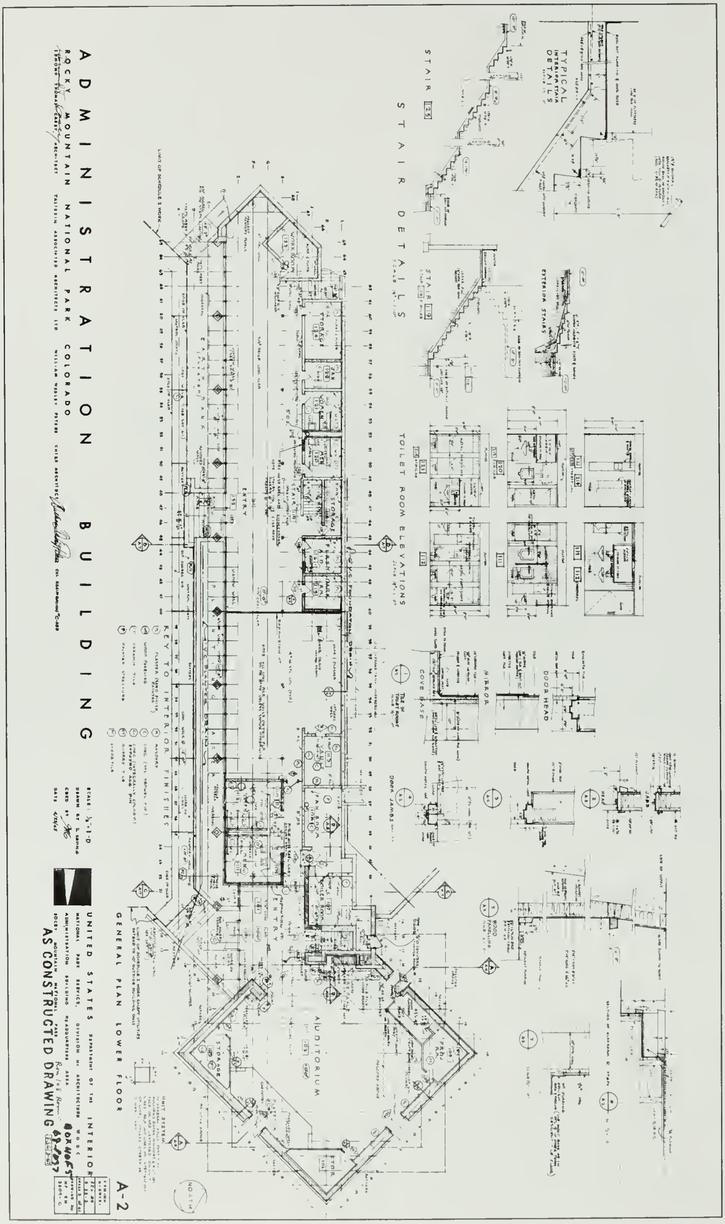
DESIGNING THE HEADQUARTERS: FOUR IMPORTANT POINTS

Regardless of Wright's reputation for previous work in the area, Taliesin Associated Architects was known for carrying on his tradition of "Organic Architecture," the design of buildings closely related to the landscape. The firm's reputation for environmentally sensitive modern architecture attracted the attention of Mission 66 planners. When the commission was accepted, Tom Casey was assigned the position of project architect. Casey designed and supervised the building from concept through completion, as was the firm's standard practice. In an interview, Casey used "four points" to explain how Wright's philosophy influenced the design of the Headquarters.[26] First, the building had to appear part of the site and not merely sit upon the land. Second, methods of structural manipulation were employed to destroy the traditional "box" characteristic of so much American architecture. Third, materials would be chosen for the effects of weathering over time so that they might reveal their true nature. And finally, if the building were to represent American architecture, it must somehow symbolize democracy. Like Le Corbusier's famous "five points," these four points were intended to simplify Wright's complex and continually changing design philosophy into terms the public could understand. Taliesin developed this summary of Wright's teachings in the early 1980s, when the firm was preparing a traveling exhibit of his work called *In the Realm of Ideas*. Although Wright himself never distilled his philosophy in this way, this concise formula helps to explain certain aspects of the headquarters design.

In plan, the building Casey designed resembles several of the early Park Service schemes: it consists of a long corridor of administrative offices attached to a larger room housing featured visitor services. The box is "burst" by a triangular conclusion to the administration wing and the 45-degree rotation of the auditorium, which results in an unusual lobby space. The building is sited "in the land" so that the transition from the upper to the lower floor is hardly noticeable. And yet employees

Figure 55. This sketch of the front elevation of the Headquarters served as a cover sheet for the set of "as constructed" drawings completed in March 1967. Courtesy National Park Service Technical Information Center, Denver Service Center.



ADMINISTRATION BUILDING
ROCKY MOUNTAIN NATIONAL PARK COLORADO
EDMOND THOMAS CASEY ARCHITECT
TALIESIN ASSOCIATED ARCHITECTS LTD
WILLIAM WESLEY PETERS CHIEF ARCHITECT
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, DIVISION OF ARCHITECTURE
ADMINISTRATION BUILDING HEADQUARTERS AREA
ROCKY MOUNTAIN NATIONAL PARK
AS CONSTRUCTED DRAWING
GENERAL PLAN LOWER FLOOR
A-2
KEY TO INTERIOR FINISHES
STAIR DETAILS
TYPICAL INTERIOR STAIR DETAILS
EXTERIOR STAIRS
TOILET ROOM ELEVATIONS
MIRROR
DOOR HEAD
COVE BASE
DOOR JAMBS
WOOD PANELING
WORK ROOM
STORAGE
ENTRY
AUDITORIUM
BOILER ROOM
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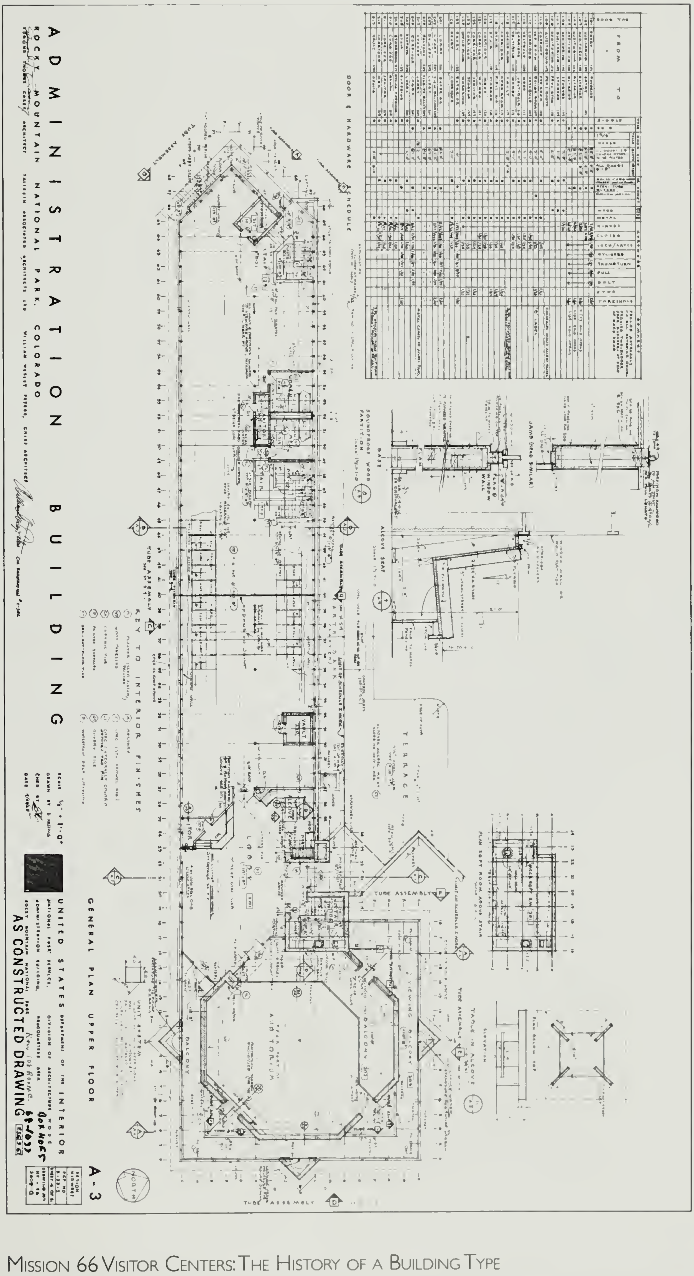

ADMINISTRATION BUILDING
ROCKY MOUNTAIN NATIONAL PARK, COLORADO
TALIESIN ASSOCIATED ARCHITECTS LTD WILLIAM WESLEY PETERS, CHIEF ARCHITECT
DOOR & HARDWARE SCHEDULE
SOUNDPROOF WOOD PARTITION
ALCOVE SEAT
TERRACE
KEY TO INTERIOR FINISHES
LOBBY
TUBE ASSEMBLY
PLAN SEPT ROOM ABOVE STAIR
TABLE IN ALCOVE
VIEWING BALCONY
BALCONY
AUDITORIUM
GENERAL PLAN UPPER FLOOR
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ADMINISTRATION BUILDING
ROCKY MOUNTAIN NATIONAL PARK
AS CONSTRUCTED DRAWING
A-3
NORTH

Figures 56 (page 192) and 57 (page 193). Lower and upper floor plans of the Headquarters, Rocky Mountain National Park. Courtesy National Park Service Technical Information Center, Denver Service Center.

entering from the rear perceive the building as two stories. This level change and the organization of spaces effectively separates visitors from park staff without requiring prohibitive signs or resulting in confusion and unnecessary traffic in the staff area.[27] The transition from inside to outside is also emphasized using a variety of Wrightian methods. The entrance to the main lobby is low and dark, but opens into a lobby with a higher ceiling. Lights hidden behind the steel facia and natural lighting from a clerestory window on the west side enhance the contrast from low to high, dark to bright. These effects are also apparent in the office corridors, where oppressively low halls lead to offices with high ceilings and clerestory windows.

The third "point" of design, the nature of materials, is both the most obvious and the most complex. The disoriented visitor is likely to stumble inside without paying much attention to the variety and color of stones, their contrast with the bare concrete, or the pink paint under the eaves that matches mortar and sidewalk. But even the most oblivious might notice the unusual Cor-ten steel framework enveloping the second story of the building. The dynamic pattern wrapping around the building is built up in several layers, with thin steel sheets welded onto the thicker tubes that form the framework. The resulting abstract design, a series of rigid triangles said to have been derived from Indian rock art, reappears throughout the building—as interior ornament, in the angles of rooms, and other unexpected places. Steel trim is also a feature along the roof of the building, where it serves as a cornice and is embossed with a decorative pattern. This design is repeated in the pressed metal panels around the auditorium. If the roughness and redness of the stones is intended to blend with the surroundings, the steel ornament seems a deliberate effort to fight this tendency. Even the steel's deep reddish color fails to "naturalize" this sharp, industrial material. Whether the building is successful in its effort to satisfy the fourth point—to qualify as "democratic" architecture—is purely subjective. That the Headquarters was designed by architects, and intended to convey abstract meaning, however, is obvious.

In a general way, "the four points" can be observed in any Wrightian design. For the purposes of this study, however, comparative analysis is limited to the examples that the apprentices knew best: Taliesin West in Scottsdale, Arizona, and Taliesin in Spring Green, Wisconsin. A quick glance at Taliesin West establishes its striking resemblance to the Headquarters building—the low profile, stone aggregate in cast concrete, and exposed structural system. The buildings draw attention to the landscape, both through siting and choice of material. Wright described Taliesin West as a ship, with its "concrete prow" facing south overlooking Paradise Valley and the Camelback Mountains.[28] The Headquarters also has a ship-like form, and during construction, the auditorium end was referred to as "the east prow of the Monitor."[29] Taliesin is surrounded by low walls and planters for cactus; the Headquarters uses similar low walls to define entrances and areas for plantings. A separate theater building, known as the kiva, stands on one corner of the Taliesin complex. Not coincidentally, the amphitheater at Rocky Mountain was said to resemble a ceremonial kiva, though probably more in its association with the Taliesin building than an authentic Southwestern Indian dwelling. The symbol for Taliesin Fellowship, an interlocking square spiral, was an adaptation of a prehistoric pictograph discovered near the Ocatilla camp.[30] According to Wright, "inspiration for Taliesin West came from the same source as the early American primitives and there are certain resemblances, but not influences."[31] The ceiling of the drafting room at Taliesin in Spring Green is decorated with a pattern of jagged triangles protruding from wood trusses, much like the triangular ornament featured throughout the Headquarters. The ornament used in the Headquarters may have had its closest antecedents in the Fellowship's own design vocabulary.

BUILDING THE HEADQUARTERS

In March 1965 Superintendent Liles met with Regional Director Garrison, staff members, and Casey to review the building's working drawings and overall construction program. As on-site "architects' representative," Taliesin selected Charles Gordon Lee, a former apprentice who had established private practice in Denver.[32] The bidding process for the construction of the Headquarters began with notices advertising the "partly reinforced concrete and partly structural steel frame" building, and a May 24 press release invited potential contractors to obtain copies of plans, specifications and a photograph showing "an artist's conception" of the building.[33] Gordon Lee and WODC staff attended a June 17 "pre-bid conference" for construction companies interested in the project. Five days later, Kunz Construction Company of Arvada, Colorado, submitted the lowest bid of $652,871.95. The ground-breaking ceremony took place on July 16, and the Park Service issued a "start work order" the next week.[34] Shortly after, Liles transferred to a different park and was replaced by Superintendent Fred J. Novak.

The Headquarters' unique materials and construction required all sorts of special provisions, not to mention the use of building techniques unfamiliar to most contractors. Monthly superintendent's reports and Park Service snapshots (by WODC architect Jerry Riddell) capture the drama of the construction process, as cranes lifted the heavy walls into place. The concrete and stone walls were a puzzle of one hundred and one pre-cast concrete panels in sixty-four different sizes, one of which

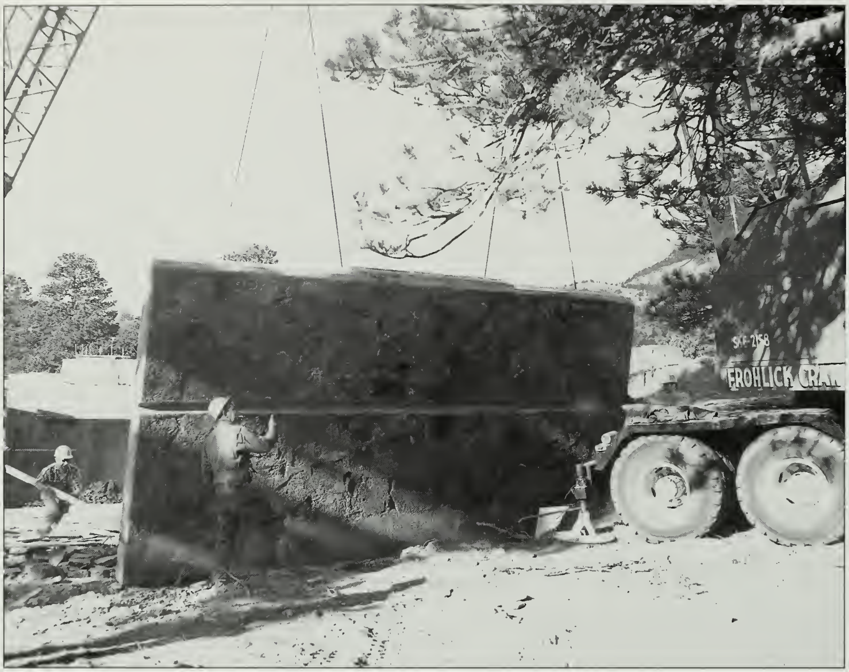


Figure 58. The concrete and stone panels were cast on the site and lifted into place by crane, November 1965. Photo by Miller. Courtesy Rocky Mountain National Park archives.

weighed 65,000 pounds. The challenge was to fit each panel into its proper location. In April, "the contractor was advised to correct the alignment of a concrete column consisting of panels PC/3-4-5," which was "out of plumb by 4 1/2"."[35] Even such a slight maladjustment could result in a serious structural problem and required immediate correction. Sections were cast in wooden forms assembled on-site; large stones were placed in the forms, concrete was poured around them, and then pebbles—or gravel aggregate—were sprinkled on the exposed wet mortar. This method of creating a "naturalistic" wall originated during the construction of Taliesin West in 1937-1939, when Wright was searching for a method of building with regional stones that could not be cut easily like granite or limestone.[36] "Face rocks" were selected for flat surfaces, thickness, and color. These were set into wood frames along with smaller stones, or "rubble," to hold them in place while a mixture of concrete and sand was used to fill the crevices.[37] By varying the size of the stones and laying them in rough horizontal rows, Wright created the illusion of cut-stone masonry. At the Headquarters, auditorium panels included electrical wires and other utilities imbedded in concrete along with the stones. Once the concrete hardened, the panels appeared to be composed of natural stone, but the seams between panels were also a visible design element, creating both horizontal striations resembling geologic strata and a sense of the building's structure. According to former apprentice Bruce Brooks Pfeiffer, the horizontal concrete lines also originated in the Arizona desert and were perfected at Taliesin West. He recalls

> ... An outing the Fellowship made to northern Arizona into one of the canyons which had once been under water, the deep, horizontal grooves in the stone canyon walls caused by water erosion greatly appealed to Mr. Wright. On his return to camp he instructed the apprentices building the walls to insert triangular strips of wood stretching in thin lines on the inside surface of the wooden forms prior to placing stones and pouring concrete. When the forms were removed the indentation of the horizontal strips left an impression within the concrete surface of the wall, creating yet another element with which the sun could make deep shadow lines across the mosaic wall.[38]

At the Headquarters, the use of lichen-covered pink fieldstone from the nearby town of Lyons heightened the ornamental effects. As Tom Casey remembers, the stone had been left in an abandoned quarry established by the government for use in Denver's first federal courthouse. The

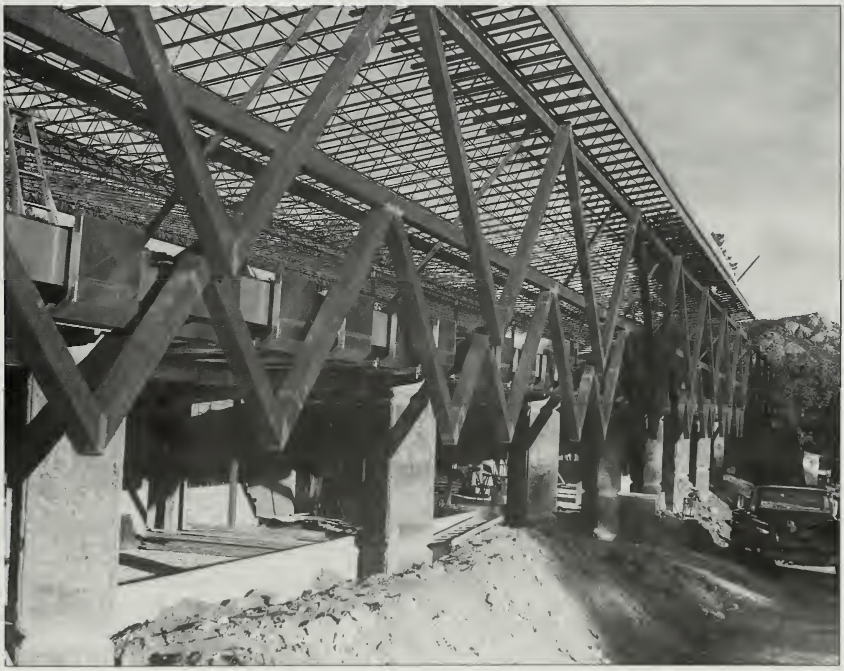


Figure 59. The building's steel framework, as seen under construction in January 1966. Photo by Lockwood. Courtesy Rocky Mountain National Park archives.

architects were delighted to find leftover red sandstone the thickness of stairs, now suitably weathered and broken into smaller chunks. They had only to gather the stone and haul it to the site.[39]

The November 18, 1966, *Estes Park Trail* announced that the Headquarters employed a "structural steel truss system" on the second floor. The architects called this dynamic and complex pattern of triangles, formed of hollow steel tubes and thin metal sheets, "architecturally exposed bare structural steel." Sections of tubes were welded together to form the triangular skeleton of the design and the Cor-ten steel welded to either side. Steel-stamped spandrel panels were attached directly to the exterior walls. A similar stamped sheet metal facia encircled the edge of the roof. This complicated mixture of structure and surface ornament proved to be one of the most problematic aspects of the design. Taliesin had to special order the material as needed because the supplier, U. S. Steel, did not warehouse the required type and only manufactured it in one mill. The steel was blasted to a white hot state to achieve the desired color effect, which required allowing the material to oxidize (rust) for a period of one to two years. Cor-ten, high carbon steel, was a new, self-sealing product that never required painting.[40] The designers chose Cor-ten both for its low maintenance and for its rich color, which worked with the desired earth tone palette and the surrounding environment. The steel typically rusted to a warm purple in the city, but at high altitudes without excessive pollutants, it turned a deep brown. In its final aged state, the steel was said to resemble tree bark. One of U. S. Steel's promotional ads includes a photograph of the Headquarters next to a tree with the caption, "this building is painting itself!" Despite pressure from the design office in Washington, D.C., slow production of the steel resulted in construction delays.[41]

The Headquarters was half complete by January 11, 1966, when union officials from the Denver Building Trades visited the site to speak with James O'Shea, acting project supervisor. A Mr. Nilander and his partner asked questions about pay rates, overtime wages, subcontractors and job classifications, promising to continue their interrogation the next week. Although they did not return, a picket line of employees from Sheet Metal Workers Local #9 formed near the site on January 17. Park Service officials met with union representatives and learned that the problem lay with the contractors handling the heating and air conditioning systems. For some time, the union had been picketing all projects associated with Croy Brothers Heating and Air Conditioning, Inc. The steel workers, plumbers and electricians chose not to cross the line for a few days, but arrangements were made with their respective unions to allow the resumption of work. At the time, the incident caused little more than an unanticipated delay, but in retrospect, it foreshadowed a history of serious deficiencies in the building's air circulation systems. The lack of a typical forced air cooling system was specified by Superintendent Liles, who believed air conditioning an extravagance, particularly at over 7,000 feet.[42]

Over the next few months, the contractors placed concrete floors with terrazzo finish, installed window walls, completed electrical and plumbing work, and built up the roof installation. The pink terrazzo was laid with gold adonized aluminum seams, the colors carefully chosen to add warmth to the interior. Window casings were of steel obtained locally. In addition to the attention lavished on interior surfaces, the Taliesin apprentices employed a Wrightian technique of dividing interior space in their use of an elaborate partition system. The basic drawings of the first and second floors included only the permanent walls around utilities and bathrooms; the remainder of the building was left open space. Additional drawings specifically devoted to the interior partition system show the space divided into the chosen office arrangement. The typical office partitions were gypsum board with a corrugated paper core. Anodized aluminum studs stretched the height of the walls about every four feet. The upper few feet of most partitions were glass, sometimes filling a triangular space, with the gold aluminum continuing up to the ceiling as a mullion. Doors were red oak veneer but solid wood to the core. In some of the fancier offices, red oak wood panels covered the gypsum board. Although the walls give the impression of permanency, their potential for change adds to the flexibility of the plan, not to mention the "breaking of the box." Whether or not park employees were intended to move the walls frequently is unknown, but one current ranger did successfully re-configure his office space at a recent date.[43] Wright used the partition system in all of his office buildings, and Casey recalled such flexibility in the Sunday school at Wright's Greek Orthodox Church (1956) as well.

At the height of excitement over the Headquarters in the fall of 1966, architect Victor Hornbein met with the superintendent to discuss preliminary drawings for the new West Side Administration Building. Although superintendent's reports indicate that Hornbein's plans were approved and even admired, the extant facility (later named the Kawuneeche Visitor Center) appears to have been designed by the Park Service's San Francisco Planning and Service Center. It is unclear whether or not collaboration took place, but Hornbein's name never appears on the final drawings. In any case, the Park Service was intrigued by Hornbein's preliminary designs, and, perhaps, by the Wrightian aspect of his work. A Denver native, Hornbein was an advocate of Wright's principles and had written about his architecture. His work in the Denver area includes two buildings that exemplify a Wrightian range of design—the Frederick R. Ross Branch Library (1951) and the Boettcher

Conservatory at Denver Botanic Gardens (1964). The library emphasizes horizontal lines in a colorful mixture of brick and glass, while the conservatory is a bubble of seemingly woven concrete that manages to appear appropriate in its garden setting. Having made a reputation for himself with local buildings, and a recent splash at the botanic garden, Hornbein was an exciting choice as architect of the park's final Mission 66 structure.[44]

Although considering the design of a third new visitor center, the superintendent was still occupied with a variety of issues at the Headquarters as the building entered its final months of construction. Park staff and members of Kunz Construction gathered in his office on May 3 to discuss defective road paving and problems with "ceiling lighting, air return, upper floor and fireplaces."[45] Taliesin did not take part in this meeting, perhaps because it resulted in some minor change orders relating to lighting, the buzzer system, relocation of the audiovisual control panel, and information desk alterations. By August 1966, the estimated completion date for the Headquarters was mid-September, but a "pre-final" inspection near the end of the month revealed two hundred and twelve items requiring attention. Nevertheless, the final inspection of the building took place on October 21. Approval was contingent on smoothing the uneven terrazzo floors in two rooms. Although "many deficiencies" remained, the Headquarters was accepted in November contingent on their correction. Park Service officials and staff began moving into the building at the end of the month. Kunz Construction was still fulfilling its part of the contract in early January, with minor repairs and alterations, which included modifying the heating system. Final payment on the building had not yet been made in April, as preparations were made for its dedication on June 24, 1967.

As the Headquarters' dedication approached, Park Service planners were busy with the design and construction of the West Side Administration Building. An excellent example of Mission 66 style and planning, the visitor center was organized according to a standardized visitor circulation pattern. Upon approaching from the parking lot, visitors were immediately confronted with the restrooms to the right and a path to the visitor center to the left. A natural stream flowed under the bridge between the restrooms and lobby. Inside, the lobby space featured a large information desk surrounded by items for sale and small exhibits, a map, and relief model. Exhibit and audio-visual rooms were envisioned as a future wing of the building, to be entered from the right side of the lobby.[46] In the interim, this space featured an outdoor patio and pool made by the stream. The lobby was discreetly connected to a rectangular administration wing hidden in the back along with employee parking. Although the visitor center has little in common with the Headquarters, both buildings are unabashedly modern and also manage to blend into their respective park environments. The West Side Administration Building drawings included a "design statement," declaring a desire to "reflect the vertical forms as found in the adjacent lodgepole forest," and noted the choice of "wood and stone materials throughout structure to relate to the natural environmental phenomenon at the area." The building's simple vertical wood framework is punctuated by floor-to-ceiling sections of glass.

The final work on the landscaping of the Headquarters began in the spring and continued through the building's dedication. The park's new resident landscape architect, James O'Shea, worked on the exterior lighting in May and June to produce field layouts and inspections. The west entrance road was staked and graded. O'Shea's other responsibilities included examining the building and concrete curbs. In August, the park issued a change order to insure exposed aggregate finish on the curb and gutters. Work on the planting plan for the Headquarters, which involved mapping the area and researching plant material, occupied O'Shea during the spring of 1967. He may have filled the three roof planters installed in the center of each side of the auditorium.[47] Despite progress with the landscaping, a few technical problems remained to be solved. The heating and air conditioning system installed by Croy Brothers was operating so poorly that a mechanical design company was recommended as a consultant for the firm.

FURNISHING THE HEADQUARTERS

Throughout the construction process, the park interpretive staff consulted with the architects regarding "floor plans and space and furnishing requirements." Because of the limited space provided for exhibits, interpreters planned to install a large orientation map in the lobby. This relief model of the park was originally commissioned by Rainbow Pictures of Denver for its orientation movie. When the film was completed in October, the park purchased the map and installed it as a permanent fixture in the lobby. Visitors saw the model when they entered the lobby and again in the thirty-five minute movie, "Rocky Mountain National Park," which was shown several times a day. Together, the movie and model were to substitute for traditional exhibits in telling the "park story."[48] Before it was installed in the lobby, the model was repaired and adapted for interpretive use by Robert Miller, a Denver artist. Curatorial staff explored methods of lighting the model and projecting features on the relief, which was accurate to .025 of an inch. Labeling the model proved to be an equally serious matter for the division of Conservation, Interpretation and Use. It wasn't until

April 1967, that staff finally chose two "backlighted 16" x 20" color transparencies with the place names on an overlay" from the K. R. Bunn Studio in Denver. Bunn was also commissioned to cast five "deck-size" relief models from the original for use at information counters throughout the park. The terrain model was considered important enough to list in the dedication program, along with participants in the construction of the building and the production of the orientation movie.

In February 1966, with the building a little more than half complete, Casey and Hill discussed their progress with the superintendent, assistant superintendent, members of their staff, Mott, and O'Shea.[49] Interior design and furnishings were the topic of the day and would continue to be an issue. After the meeting, Phil Romigh of the WODC was sent to Scottsdale to work with the Taliesin staff on interior decoration and related matters. Following in the tradition of their mentor, the firm not only planned chairs and tables, but coordinated upholstery and wood grain for just the right blend of colors and textures. The general plan of the upper floor included drawings of the simple plywood alcove seats and table. Elaborate faceted trash cans were also created especially for the Headquarters. Wright's widow, Olgivanna, was involved in the interior decoration and chose the red-orange color featured throughout the building.[50]

The Park Service may have been surprised by the importance Taliesin attached to every aspect of interior design. This attention to detail certainly did nothing to speed up the furnishing process; delays were caused by such mundane matters as waiting for the arrival of wood samples for use in matching the wood furniture with the walls. Progress on the furnishing plan was again slowed in July, when the park learned that its request for furniture had been sent to the General Services Administration and that the work order remained unapproved. In September the park was finally told to purchase the auditorium chairs, conference table, guest chairs, executive chairs, secretary chairs, office table, sofa, and carpeting from Federal Supply. Literature describing the available furniture was sent to Taliesin. Bids for furnishing and installing drapes and sheer curtains and for the construction and installation of custom-made benches and tables were issued in mid-October. Highland Interiors was responsible for benches and tables, curtains, and drapes; Elmer's Case Company of Loveland, Colorado, produced forty upholstered benches with backs from Taliesin's designs at a price of $105.50 each.[51] The only exhibit in the building, the park relief map, was moved into the lobby in November. Staff began moving into the building that month, despite the lack of carpeting and customized furniture. The Roxbury Carpet Company, selected by Taliesin, was expected to provide carpet under the proper Federal Supply requirements, but not until

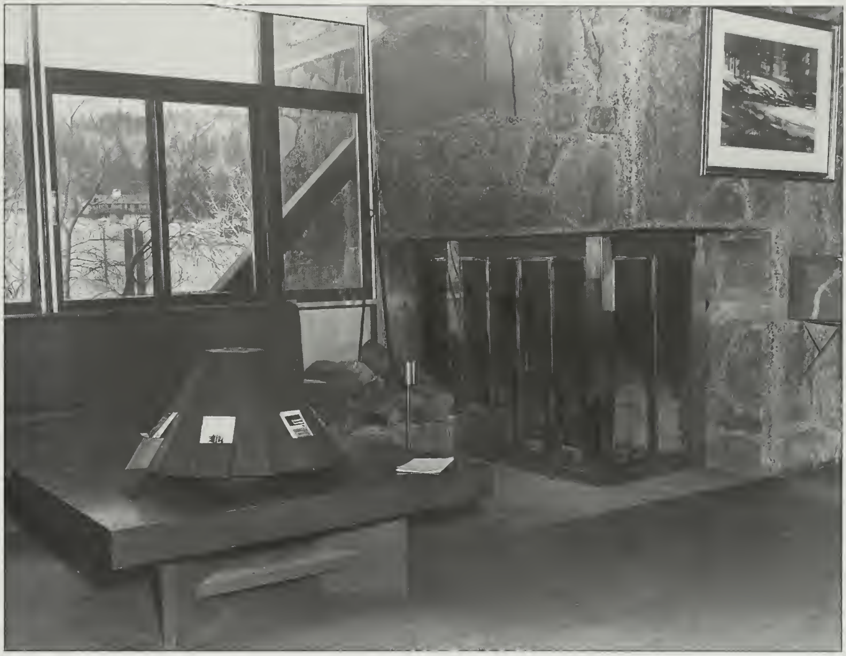


Figure 60. The original lobby included a fireplace and seating area to the right of the entrance. This view was taken in 1982, shortly before installation of the bookstore. Photo by Walt Richards. Courtesy Rocky Mountain National Park archives.

March 31. Taliesin's selections of furniture from Federal Supply were scheduled to arrive in the interim, but the carpet, chairs, and benches were not delivered until April, just in time for four special performances of the Rocky Mountain film. The drapes were installed a few weeks before the park opened to the public. Five hundred people entered the lobby on May 30, and one hundred and eighty-six saw the movie. Interpretive services also included evening illustrated talks in the auditorium.

In May, the Estes Park Women's Club sent out invitations from the Estes Park Chamber of Commerce, Town of Estes Park, and National Park Service announcing the upcoming dedication of "the new Headquarters and Visitor Orientation Building."[52] About five hundred people attended the dedication of the Headquarters at 2:00 p.m., on Saturday, June 24, 1967. According to the superintendent, cloudy skies in Denver and Boulder "kept the attendance below what had been expected." As the Estes Park High School played a festive prelude, guests assembled in the Headquarters' parking lot. The Director of the Park Service, George Hartzog, Jr., served as master of ceremonies. Congressman Wayne Aspinall delivered the featured address, entitled "Past, Present and

Future." The Estes Park Women's Club received an official "certificate of disclaimer," returning the property it had donated to the park in 1921. After the ribbon-cutting ceremony, visitors toured the building, viewed the film, listened to a string quartet from the Rocky Ridge Music Center, and enjoyed refreshments provided by the Estes Park Red Cross Canteen.[53]

THE VISITOR CENTER

By the end of Mission 66, the programmatic design of visitor center buildings had become almost systematic—a series of required spaces gathered around the central lobby and viewing decks or large windows installed as dictated by the location. The rooms tended to be spacious, well-lit and functional. At the Headquarters building, Taliesin Associated Architects inserted an element of intrigue into the required formula. Visitors entered what appeared to be a single-story building through a low entrance. The center of the lobby space featured a higher ceiling emphasized by a pressed steel "cornice" similar to the exterior steel facia, which marked the transition from the lower section of the building to the central space. Depending on the time of day, the building could be quite dim. On the northwest side, a clerestory window cut into the raised area emitted natural light. Artificial lighting was hidden behind the

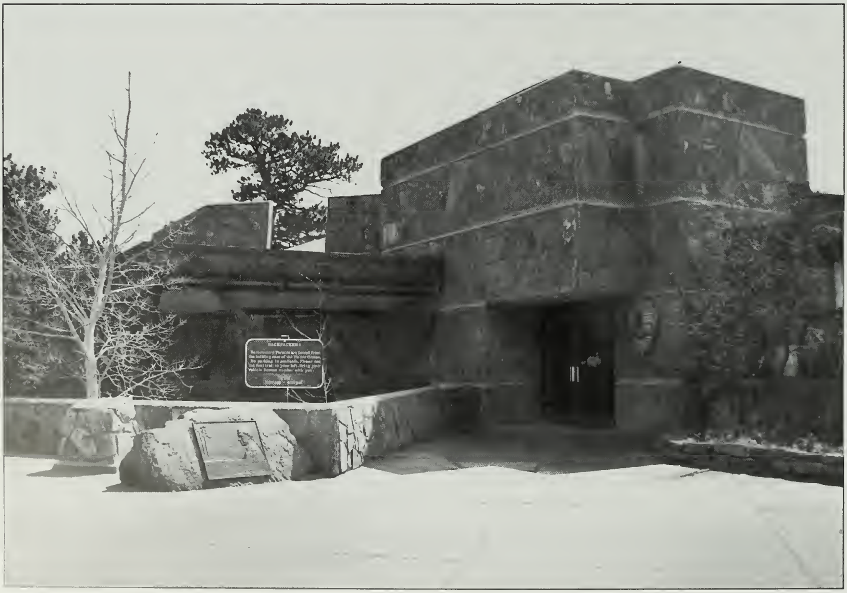


Figure 61. Rocky Mountain Headquarters, entrance, 1999. Photo by author

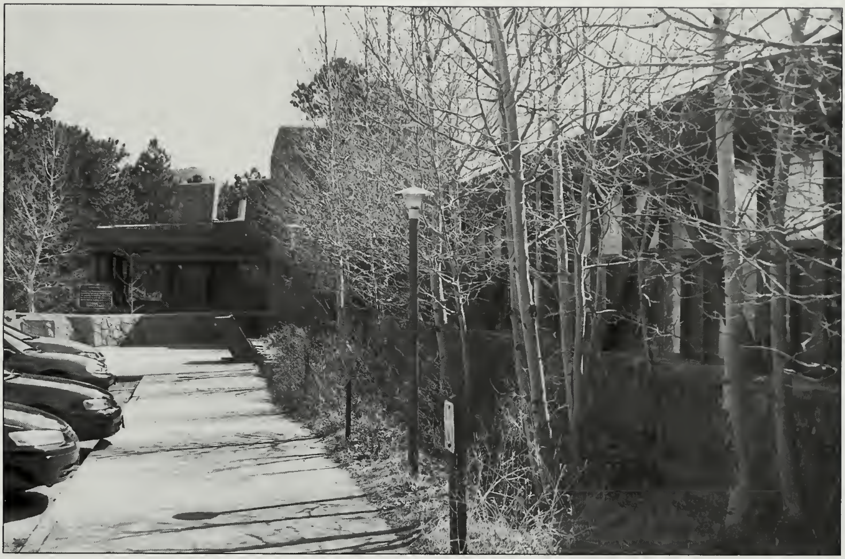


Figure 62. Rocky Mountain Headquarters, path from parking lot to entrance, 1999. Courtesy National Park Service.

steel cornice, creating a glowing effect as light bounced off the ceiling. Visitors were immediately confronted by the large relief map in the center of the room, and to its right, the information desk. Beyond was a wall of windows facing the Rocky Mountains.

When the building was first opened, the space to the right of the entrance was an alcove lined with benches facing a stone fireplace.[54] This resting place was sparsely furnished with a coffee table, a few pictures, some reading material, and a guest register. The walls around the fireplace were left rough stone and concrete, but the facing wall was wood paneled. The alcove faced the information desk. A small space behind the desk was provided for the store, and sales were conducted from the information counter. On the left side of the lobby was a stairway down to the restrooms, apparently located in the basement. The auditorium to the left of the lobby was the main interpretive attraction. From the interior balcony, visitors could look down on the main auditorium, watch the movie, and walk out onto the viewing balcony encircling the auditorium. A door in the far southeast corner of the room led to the balcony, where visitors enjoyed a spectacular view of Long's Peak, the highest mountain in the park at 14,255 feet. The structural supports on the three sides of the open balcony, in plan the corners of the auditorium space itself, formed triangular spaces for

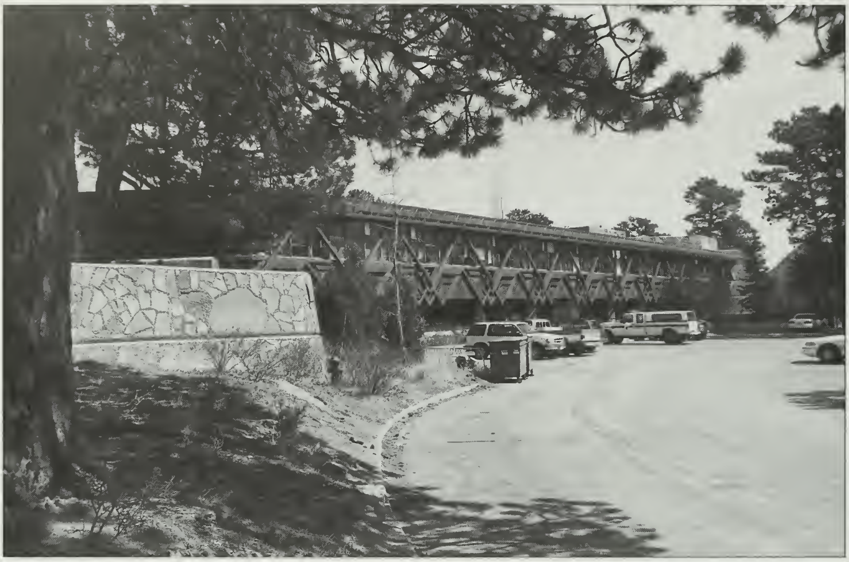


Figure 63. Rocky Mountain Headquarters, service road and employee entrance, 1999. Courtesy National Park Service.

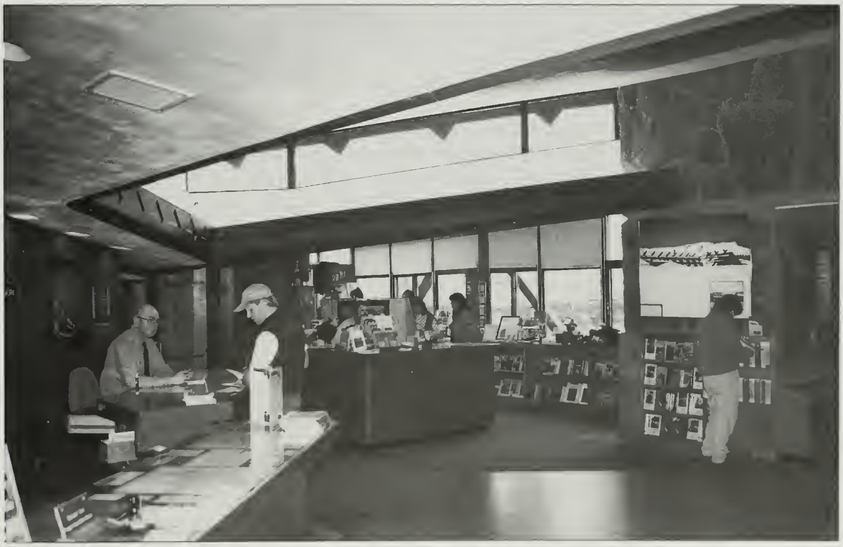
dioramas. Although they appear in drawings and the spaces were built, the dioramas were never installed.

Before venturing downstairs to the restrooms and auditorium, visitors might not realize that the building is actually two stories. The stairway leading to the first floor is wood paneled and illuminated with lighting in the steps, which allows the rest of the space to remain dark in safety. As they come down the stairs, visitors are surprised to see natural light emanating from a wall of windows in front of them and a glass door leading to an exterior porch. To the left is the entrance to the auditorium and to the right, the restrooms. The low ceiling of the first floor landing becomes even lower upon entering the restroom area. A door in the vestibule between the men's and women's restrooms opens into the first-floor office wing.

The Headquarters is a very different place for park employees, most of whom enter the building from the rear. From this entrance, the facade is two stories with double walls of windows that expose the building's administrative function. Low stone walls, a stone planter, and boulders contribute to the landscaping, but this side of the building has an aura of efficiency. The primary entrance to the office wing is not the auditorium porch, but a central door opening into the main hall and facing the stairway. The first level contains museum offices and work spaces, while the upper floor accommodates administrators, the superintendent, and a conference room. On both levels the hallways have low ceilings that actually become lower in the center, like pitched ceilings turned inside out. In contrast, the offices are spacious and so full of light that special curtains are required. Customized light panels cover the entire ceiling of each office, adding a sculptural quality to the rooms. Although the offices were formed by movable partitions, the fine materials employed give the spaces an aura of permanency. From inside the office wing, the administrative function appears entirely separate from the visitor services; in practice, the public has easy access to the park offices and park employees can step out of the office wing into the visitor space in a moment.

In 2000, the visitor center appears much as it did upon its dedication in 1967, but elements of the visitor's experience have been significantly altered. In an effort to free the information desk from increasing customer interruptions, the fireplace in the alcove space was boarded up and the area converted into a store for the Rocky Mountain Nature Association.[55] While this change might have solved that problem, it also significantly reduced available lobby space. Not only is the lobby typically overcrowded, but alterations to the auditorium and balcony have redefined the visitor circulation pattern. The installation of a new movie projector sealed access to the exterior balcony. The circuit around the balcony and through the auditorium was permanently closed, and access to the viewing platform was limited to the single door at the extreme southwest corner of the lobby. In 2000, visitors who actually find this

Figure 64. The bookshop now occupies the original seating area, 1999. Courtesy National Park Service.



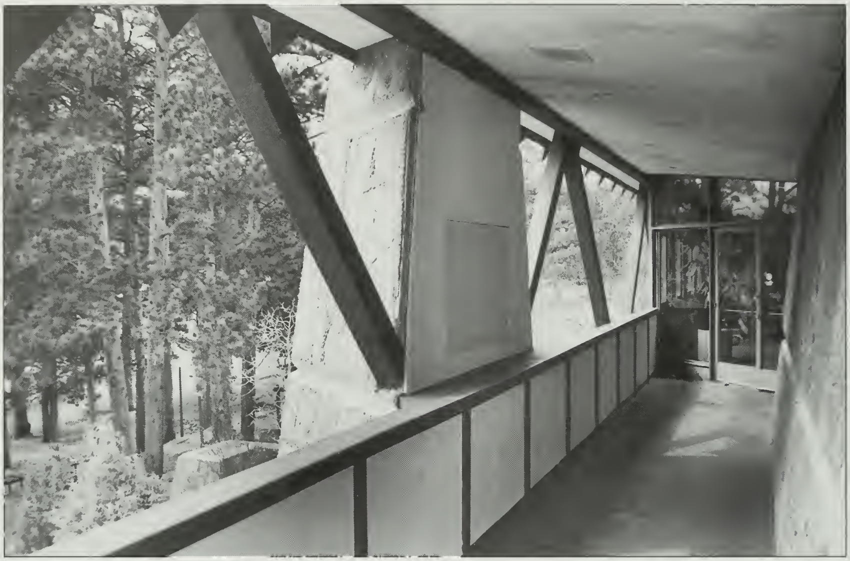


Figure 65. According to the original circulation plan, visitors passed from the lobby to this outdoor mezzanine, circled the east end of the building, and entered the auditorium from the south facade. The square set into the concrete pillar was intended for a diorama, most likely with information about Long's Peak, which would have faced the visitor at this vantage point. Photo by author, 1999.

entrance and walk around the balcony are forced to retrace their steps. Although a seemingly minor element in the overall plan, this circuit of park views was a crucial part of the building's program as originally designed. Without such free and easy circulation through the spaces, the sense of interior and exterior space is disturbed; the box is no longer broken. Perhaps most important, the dramatic view of Long's Peak ceases to become part of the visitor's experience.

Planning for the first repairs to the building began in August 1968, when modifications were designed to improve the faulty heating system. An alteration in the auditorium's central light fixture was also planned at this time. The working drawings for these improvements include details for constructing a new cupola on the auditorium roof as part of the heating and cooling system. Recent aesthetic and functional issues have been resolved through consultation with preservation experts. When light panels were in need of replacement in 1997, historical architects from the Intermountain Region suggested replacing the original lighting units with reproductions. Rather than install powerful T-10 hanging fluorescent lights, which would have significantly changed the office space, the park replaced original fixtures with panels that appear identical on the outside, but are textured on the inside to more effectively distribute light.[56] Unlike many Mission 66 buildings, the Headquarters has been maintained by a park staff that understands its historic and architectural value.

The Headquarters was listed in the National Register of Historic Places as part of the Utility Area Historic District in Rocky Mountain National Park's 1982 multiple resource nomination. In 2000, the park is in the midst of a rehabilitation project, which will provide an exterior comfort station and equip the area for handicapped visitors. These changes will involve a significant re-configuration of the parking lot, the creation of a plaza area, and new pathways between the restrooms and visitor center. The restrooms on the first floor will be replaced with park exhibits. In the design of this alteration, the Park Service has taken pains not only to maintain the integrity of the original building, but also assure that contemporary work conforms to the historic design.

ENDNOTES

[1] William C. Muchow & Associates, a firm known for postmodern buildings throughout the region, designed the Alpine Visitor Center in 1962. Just a year after the building was dedicated, Muchow used Lyons sandstone and red tile roofs in his design for the Engineering Sciences Center at University of Colorado, Boulder. See Thomas J. Noel, *Buildings of Colorado* (New York: Oxford University Press, 1997), 179.

[2] Superintendent's Annual Report (Granville B. Liles), July 1965, Rocky Mountain National Park (ROMO) library.

[3] Lloyd K. Musselman, "Rocky Mountain National Park Administrative History, 1915-1965," (National Park Service, Washington, D.C., 1971), 210-211.

[4] Mission 66 Prospectus, Final Draft, 1957, Archaeologist's Files, Rocky Mountain National Park.

[5] Mission 66 Prospectus, 1957.

[6] "Developed Areas—East Side Interpretation," Master Plan Development Outline, March 1958, Technical Information Center (TIC), Denver Service Center (DSC).

[7] "Visitor Center, Grand Lake Entrance," April 9, 1958, 2 sheets, microfiche, TIC, DSC.

[8] C. W. Buchholtz, *Rocky Mountain National Park, A History* (Boulder: Colorado Associated University Press, 1983), 205.

[9] Four years later the chief ranger's office was built nearby, and in 1956 a library building was moved to the site. By 1960 the overcrowded administration facility could no longer satisfy park needs, and some offices were moved to the utility area in Beaver Meadows. "Park Headquarters to Move," press release, Rocky Mountain National Park, September 21, 1966.

[10] The WODC produced a "layout plan" for the Beaver Meadows Entrance Station showing the High Drive approach road. The drawing is dated August 4, 1958, and was approved by Superintendent Lloyd in May 1959.

[11] All drawings noted can be found on microfiche in the Technical Information Center, Denver Service Center, Lakewood, Colorado.

[12] Copies of these two drawings are on file at the William Wesley Peters Library, Taliesin West, Scottsdale, Arizona. The drawing is referenced as "building-NP-RM-3609 2/63-Doty" on drawing no. 3610 (March 1963), a site development plan for the administration building and visitor center designed by James O'Shea. Doty's building was located on the north side of the road across from the Beaver Meadows utility area.

[13] Master Plan Development Outline, "narrative," May 1960 with revisions in April and July 1963 and May and December 1964, microfiche copy, TIC, DSC.

[14] Peters and Casey visited the park on June 3. See Superintendent's Monthly Report, June 1964, ROMO library.

[15] Interview with Edmund Thomas Casey by Tom Keohan, National Park Service historical architect, February 15, 1997. In an interview with the author on September 23, 1998, Casey said that Udall wanted architects from his home state of Arizona for political reasons, but the Secretary also had a personal interest in the architecture of Frank Lloyd Wright. According to *Washington Post* critic Wolf Von Eckardt, Udall was "beginning to extend what he calls the 'conservation ethic' to the wastelands of our cities. He is just now skillfully trying to save a small house designed by Frank Lloyd Wright in Falls Church, Virginia, from the bulldozers. He has moved to declare Wright's famous Robie House in Chicago a national [historic] landmark." See "The Park Service Dares to Build Well," *Washington Post* (March 29, 1964).

[16] Telephone interview with Richard Strait by the author, April 5, 1999. Richard Strait graduated with a degree in landscape architecture from Utah State in 1958 and became the resident landscape architect at Rocky Mountain in 1962. He participated in the site selection process for the visitor center at Beaver Meadows and worked on the landscape plan for the Alpine Visitor Center. In 1965 Strait was transferred to the regional office in Omaha and replaced by James O'Shea. Strait is now retired and living in Littleton, Colorado.

[17] According to a recent guide to regional architecture, the "building was designed for the north side of the road, but a powerful park superintendent moved it to the south side, so visitors enter at the rear and rarely see the original facade." Thomas Noel, *Buildings of Colorado* (New York: Oxford University Press, 1997), 238. In fact, although Liles contributed to the building program, the building was designed specifically for its present site. Tom Casey speculated that the left turn off the main road may have contributed to the pervasive myth of the reversed facade. Interview with Edmund Thomas Casey by the author, October 23, 1998.

[18] "New Park Visitor Center Will Be Located Near Present NPS Utility Area," *Estes Park Trail* (September 4, 1964), 1.

[19] Kathryn Smith, *Frank Lloyd Wright's Taliesin and Taliesin West* (New York: Harry N. Abrams, Inc., 1997).

[20] Tobias S. Guggenheimer, *A Taliesin Legacy* (New York: Van Nostrand Reinhold, 1995), 102.

[21] "Brief History of the School," Frank Lloyd Wright School of Architecture 1997 Self-Study Report, Taliesin West; William E. Mims, *Interiors and Sources* (September 1998).

[22] William Wesley Peters (1912-1991) was born in Terre Haute, Indiana, and joined the fellowship in 1932 at age twenty. Considered a leader in the school, Peters devoted his life to furthering Wrightian architecture as a member of the Frank Lloyd Wright Foundation and chief architect of Taliesin Associated Architects. Edmund Thomas Casey (b. 1924), a native of Los Angeles, California, attended Pasadena Jr. College before joining the armed services. Five years later, he attended the University of California at Berkeley under the G.I. bill, and graduated with a B.A. in architecture in 1950. A month later, Casey joined Taliesin Fellowship, also under the G.I. bill. Curtis Besinger, *Working with Mr. Wright, What it Was Like* (Cambridge: Cambridge University Press, 1995); interview with Edmund Thomas Casey by the author, September 23, 1998.

[23] "NPS Building Architectural Sidelights," *Estes Park Trail* (November 18, 1966); Pasquale Marranzino, "Early Wright Design," *Rocky Mountain News* (June 1, 1965), 53; "Park Headquarters Building Owes Its Design to Pioneering Heritage of Frank Lloyd Wright," *Estes Park Trail* (May 26, 1972).

[24] "Beautiful New Hotel for Horse Shoe Park," *The Mountaineer* (Estes Park), Vol. 1, (June 4, 1908), 1.

[25] Wright described the Horseshoe Inn in his Wasmuth portfolio. The monograph on his work of this period includes a photograph of the sketch and further assurance that the building was never constructed. See Yukio Futagawa, ed. *Frank Lloyd Wright Monograph*, 1907-1913 (Tokyo: A.D.A. Edita, 1987), 164.

[26] Interview with Casey by Tom Keohan.

[27] By this time, the Park Service also had a tradition of separating visitor and administrative areas by housing offices in a two-story wing entered from a parking lot

behind the visitor center. Cecil Doty used this design at Zion National Park (1957-1960) and Colorado National Monument (1960-1963).

[28] Suzette A. Lucas, ed., *Taliesin West, In the Realm of Ideas*, interpretive guide (Scottsdale, Arizona: The Frank Lloyd Wright Foundation, 1993), 12.

[29] "East prow of the Monitor" is written on the back of a July 1966 construction photograph in the photo collection at TIC, DSC.

[30] Besinger, *Working with Mr. Wright*, 46-47.

[31] Frank Lloyd Wright, "Sixty Years of Living Architecture," exhibition catalog, (New York: Museum of Modern Art, 1953).

[32] Charles Gordon Lee (d. 1966) received a B. S. in architecture from the University of Pennsylvania before participating in the fellowship, first in 1941-1942 and again in 1947-1948. Lee worked briefly in partnership with Kelly Oliver, another former apprentice, and when he died in 1966, Oliver took over as Taliesin's representative for the Headquarters project. Hiring architects as construction supervisors was standard practice at Taliesin.

[33] "Bids for Administration Building at Rocky Mountain National Park," press release, May 24, 1965, ROMO archives. *The Denver Post* and *Rocky Mountain News* both included a photograph of the "artist's conception" on May 26 and 28 respectively.

[34] Superintendent's Monthly Reports, June and July 1964.

[35] Superintendent's Monthly Reports, April 1966.

[36] Lucas, ed. *Taliesin West, in the Realm of Ideas*, 15.

[37] Besinger, *Working with Mr. Wright*, 59.

[38] Bruce Brooks Pfeiffer, *Frank Lloyd Wright Selected Houses*.

[39] Telephone Interview with Edmund Thomas Casey by the author, October 23, 1998.

[40] Eero Saarinen "used Cor-Ten weathering, self-protecting steel" in his John Deere and Company Administrative Center, Moline, Illinois of 1963. See John Peter, *The Oral History of Modern Architecture* (New York: Harry N. Abrams, Inc., 1994), 205.

[41] "Begin Move to New NPS Adm. Building," *Estes Park Trail* (November 18, 1966); Interview with Casey by Tom Keohan.

[42] The lack of air conditioning was considered a problem by the subsequent superintendent, and the architects were admonished for not insisting on it despite Liles' desires. The issue was actually taken up with higher echelons of the Park Service. Interview with Casey by the author, October 23, 1998.

[43] "Interior Partitions, Upper Floor;" "Interior Partitions Lower Floor," as constructed drawings, #3609-C, TIC.

[44] Rodd L. Wheaton, unpublished speech, Modern Architectural League's Distinguished Service Award, summer 1995. The award was presented to Victor Hornbein the month before he died.

[45] Superintendent's Monthly Report, May 1966. Project Inspector Eugene Mott attended this meeting and assisted throughout the final stages of construction. From April 1961 to 1963, Mott was the primary inspector of the Painted Desert Community, Neutra and Alexander's design in Petrified Forest, Arizona.

[46] This wing, the Kawuneeche Visitor Center Addition, was designed in March 1989 along the lines suggested in the early drawings.

[47] The planters appear lush with greenery in artists' sketches, but are no longer in use.

[48] The "western premier" of this movie and a related film, "Our Living Heritage," took place at the Denver Museum of Natural History on August 25, 1966, as part of the Park Service's 50th birthday celebration. The program noted that the relief model used in the park's interpretive movie would become part of the visitor center. "Our Living Heritage" was shown simultaneously in Washington, D.C., and Richmond, Virginia. See Rocky Mountain National Park, clippings file, brochures, Western History Room, Denver Public Library.

[49] "Hill" was probably John DeKoven Hill, a member of the Fellowship from 1937 to 1953 and from 1963 to an unknown date. In 1995, Hill was chairman of the board of directors of the Frank Lloyd Wright Foundation.

[50] "New National Park Headquarters," *Coloradan* (Fort Collins) June 14, 1967, 11.

[51] "Fact Sheet for Completion Report," Invoice, May 17, 1967, ROMO archives.

[52] Invitation to dedication, n.d. ROMO, archives.

[53] Dedication Program, Headquarters and Visitor Orientation Building, June 24, 1967, ROMO archives.

[54] The Park Service designed a glass enclosure for the fireplace in October 1968.

[55] "As Constructed" designs for the information and sales counter are dated January 1975 and 1977. Park photographs dated winter 1982 are labeled "headquarters seating area in visitor lobby (upstairs) before removal."

[56] Tom Keohan to the author, electronic mail, September 28, 1998.

CHAPTER 6

CECIL DOTY AND THE MISSION 66 VISITOR CENTER

The five visitor centers featured in this study are exceptional, both because they were designed by notable architectural firms and because they make up less than five percent of the facilities constructed for visitors during the Mission 66 program. From 1956 to 1966, the Park Service commissioned over one hundred new visitor centers and additions to existing museum buildings. Local contract architects were responsible for some of the designs, but the bulk of the work went to Park Service architects. Foremost among these in productivity was Cecil Doty, an architect from Oklahoma trained in the traditional Park Service Rustic style of design.[1] Along with a handful of his colleagues, Doty made the transition from the rustic—adobe or alpine depending on the natural and historical setting—to a modernist style stripped of such obvious associations with regional context. According to Doty, this shift from the old to the new architecture was entirely natural; he was simply doing his job under new parameters and within a changing social and political climate. While most of the selected contract architects were trained in an elite tradition of architecture as art, Doty was educated in architectural engineering at a manual arts school and spent almost his entire career working in the parks. When Doty designed modernist buildings, he did so within the Park Service tradition from which Mission 66 evolved. His buildings were not icons of modern architecture, nor were they typically among the buildings that are known for their Mission 66 character. Doty's designs were modest and utilitarian. As if in response to Director Wirth's greatest aspiration for his construction program—the creation of structures subordinate to the park landscape—Doty designed many unremarkable buildings. And yet, while much of the contract architects' work appears dated, Doty's buildings often achieve a kind of timelessness. Perhaps most important to the Park Service, his designs are sensitive to the site and historical context without being cheap rustic imitations or modernistic spectacles. The significance of the Mission 66 visitor center can only be evaluated after a closer look at the work of Cecil Doty.

In 1954 the Park Service reorganized the design and construction component of its four regional offices into two centralized facilities: the Eastern Office of Design and Construction (EODC) in Philadelphia overseen by Edward S. Zimmer and the Western Office (WODC) in San Francisco supervised by Sanford J. Hill. Although Director Wirth had yet to launch the Mission 66 program, this concentration of forces assumed the need for massive physical improvements and the organization necessary to execute a far-reaching construction program. The responsibilities of the respective offices included supervising the preparation of master plans and construction projects, conducting surveys and research, and preparing building plans and specifications.[2] These duties would not change with Mission 66, the planning of which began in earnest during the spring of 1956, but they would be magnified many times over. Such an influx of design work demanded that the Park Service hire contract architects from the private sector. This policy of hiring outsiders was not new. During both World Wars, the federal government called upon modern architects, many of whom were recent European immigrants, to help design wartime housing. The New Deal programs that had done so much for the parks during the 1930s and 1940s relied heavily on the expertise of private architects, designers, and craftsmen. As supervisor of the Civilian Conservation Corps state parks program, Conrad Wirth had firsthand experience with such successful partnerships. The CCC programs not only established the Park Service's reputation for well-built rustic style buildings, but also set a precedent for collaboration on such projects. A chief architect might sketch a design, and then pass it on to his staff to refine and embellish. For Wirth and many of his most trusted employees, the Mission 66 approach recalled the CCC effort.[3]

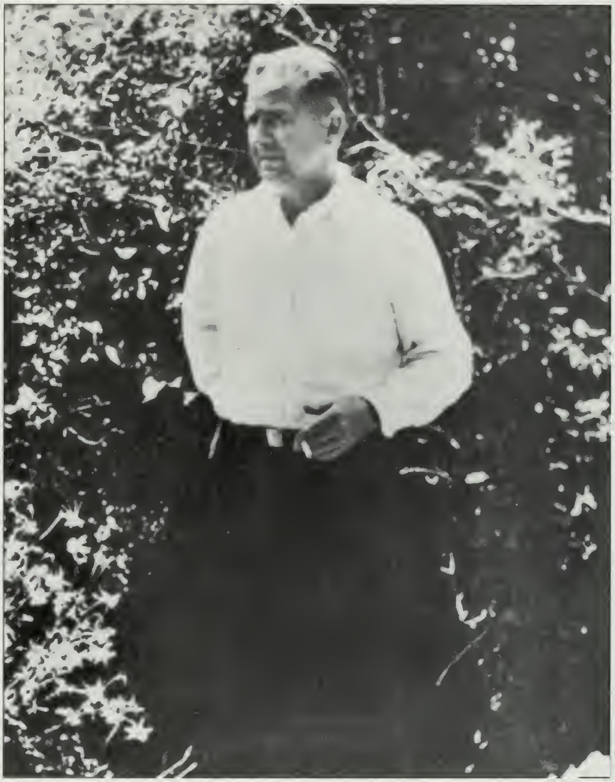
The new program's contract policies were outlined in a memorandum to the Park Service field offices in March 1956, explaining that superintendents were responsible for determining which projects would be completed by contractors and which by day labor. In general, it was "the policy of the Department and the Service to accomplish as much construction work by contract as is possible. It expedites the obligation of funds and assures completion of projects within the amounts available. Day labor is to be used only in exceptional cases where contracting is not practical."[4] Members of the design and construction offices had been forewarned of such changes in procedure. During their conference at Great Smoky Mountains (April 1955), they had discussed the Mission 66 program and immediately issued several statements and recommendations based on general consensus. The Park Service design offices voiced their "wholehearted support" for the program, which would obviously expand their role in park architecture and planning. In anticipation of Mission 66, they suggested that Wirth prepare a construction schedule by region to guide them in gathering data and developing surveys necessary for such extensive design work. The offices of design and construction also deemed themselves best equipped to create plans and specifications for construction projects and to prepare the preliminary drawings for all buildings. Professional private offices could then produce construction drawings on a contract by contract basis. It was recommended that the two regional offices be granted "contract authority to negotiate with professional firms in private practice, of recognized ability."[5] According to this arrangement, Park Service architects were entirely responsible for design concepts, while contractors merely performed the routine work of drafting working drawings. In practice, the relationship with contract architects would vary according to project, but it would usually involve some collaboration with Park Service colleagues.

That construction projects were underway by mid-summer is indicated by a communication from Director Wirth admonishing superintendents and regional directors for expanding their projects beyond the established limits. Evidently, some supervisors were using up emergency funds in the first contract, leaving little margin for over-runs or contingencies. Even more potentially devastating was the fact that unauthorized adjustments in contracts were affecting the planning schedule, which was established two years in advance. A single misjudgment could start "a chain reaction," and necessitate the revision of the entire schedule.[6] Field offices were to required to submit change orders and other cost overruns to the regional director for approval.

CECIL DOTY AND THE NPS TRADITION

One of the most prolific designers in Park Service history, Cecil John Doty (1907-1990), is also one of the least known. Doty's absence in the annals of Service history reflects both the nature of architectural collaboration and the fact that he never entered the supervisory ranks of the Park Service. His name is often scrawled on the title block in the corner of a drawing, but has no place in administrative histories. And yet, in his thirty-five-year career, Doty worked with some of the Park Service's most famous designers and created many of the buildings park employees use every day. Doty grew up on a farm in May, Oklahoma, and graduated from Oklahoma A & M (now Oklahoma State) with a degree in architectural engineering in 1928. During his college years, Doty remembers the influence of "Paul Cret by proxy." The famous Philadelphia architect was a mentor to one of Doty's instructors who had recently graduated from the University of Pennsylvania. Through Cret's work, Doty was introduced to Beaux-Arts neoclassicism adapted to modern tastes.[7] Doty credits his sense of "progressive architecture" to this early exposure to Cret's design.

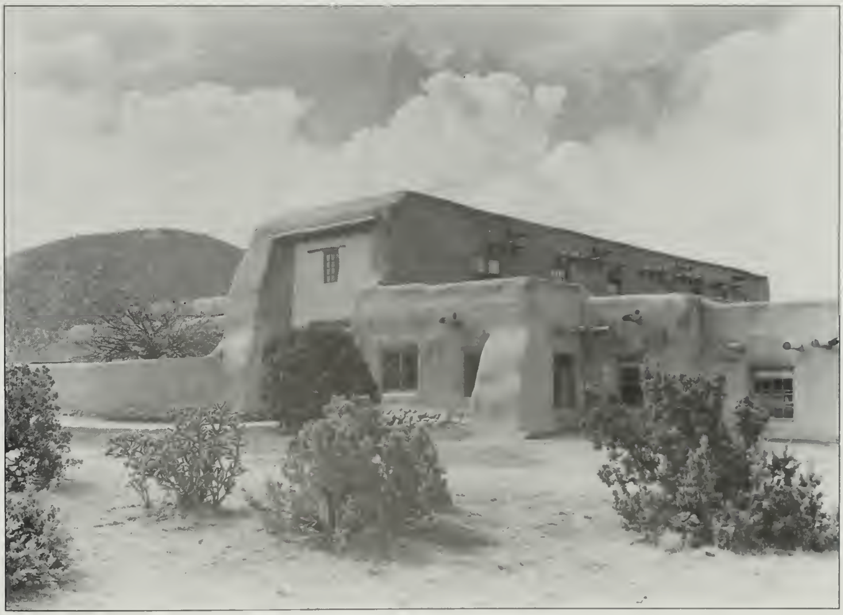
Figure 66. Cecil John Doty. Courtesy National Park Service Region Three Headquarters, Santa Fe.



During the Depression, Doty was lucky to receive occasional work from the local architectural firm Valberg and Drury. He also briefly taught freehand drawing and architectural history at his alma mater. The 1930s was a difficult time to open private practice, and Doty's effort to launch a firm in Oklahoma City failed. Soon after, he joined the CCC state parks program, working under the title "file clerk" in the newly established office before officially signing on as an architect. Director Herbert Maier hired Doty to finish plans for a museum at Glacier. As Doty later related, his early architectural experience mirrored that typical of young draftsmen: he worked under the principal designers, imitating their style as much as possible. Doty and his fellow draftsmen were encouraged to look through photographs of Maier's work, which they called "The Library of Original Sources." Many of these photographs appear in three paperbound manuals compiled in 1935 to guide CCC employees in architectural design.[8] Although Doty expressed pride in one of his favorite projects from this period, the museum in Custer State Park that he drew up on the dining room table of a log cabin, he also admitted that it was "a pretty cold copy off" Maier's Norris Basin Museum.[9] In January 1935, Doty was given the position of associate engineer and paired up with landscape architect Harvey Cornell for state park work in Oklahoma and Kansas.[10]

When the Oklahoma office was reorganized in 1936, Doty became regional architect, and, the next year, followed Maier to the new regional office in Santa Fe. A contingent of young architects from Oklahoma A & M—Raymond Lovelady, Milton Swatek and Lada Kucera—also moved to Santa Fe.[11] The reorganization marked Doty's shift from work in state parks to national parks, which took place when the programs were officially combined. In the months preceding the move, Doty recalls preparing the initial design for his future office, the Santa Fe Region Three Headquarters. He created preliminary plans having never seen the site, with inspiration from memories of the area and, perhaps, the Library of Original Sources.[12] After visiting the site in July 1937, Doty prepared the final sections and elevations. It was a traditional adobe building, one-story except for a double-height entrance area, with exposed timber vigas and adobe bricks constructed on site by the CCC.[13] Newspaper accounts of the building praised Associate Architect

Figure 67. Region Three Headquarters, Santa Fe. Courtesy National Park Service Region Three Headquarters, Santa Fe.



Doty for a fine adaptation of regional architecture. The cover of the first "National Park Service Region Three Quarterly," of which Doty was art editor, featured the architect's pen and ink drawing of the new building.

In 1939, Park Service Architect Albert H. Good, compiler of *Parks and Recreation Structures*, expressed admiration for the headquarters and imagined an expanded role for its style in the future. "If the so-called modern, or International Style, of architecture is to gain in popular appeal so that it is universally adopted . . .there is probably in the United States no traditional architecture so kindred and complementary to it as the early architecture of the southwest. Broad, simple surface, a sense of the horizontal, and setbacks are common to both."[14] Although Good considered the presence of modernism in historic areas "unfortunate," he also realized that the style could be employed without transforming the scale and atmosphere of cities like Santa Fe. Good's statements not only demonstrate that the Park Service understood the potential of modern architecture nearly twenty years before Mission 66, but also that the boundaries between the two styles were not so rigid. Unknowingly, Good predicted the ease with which Doty would move from the horizontal planes of southwestern rustic to the flat roofs and low silhouettes of modern visitor centers.

After designing his first National Park building, Doty worked on various smaller projects before transferring to the San Francisco Region Four Office in 1940. It was probably here that he assisted Lyle Bennett, the designer of the southwestern style buildings at Bandelier, on plans for several similar structures at White Sands National Monument in New Mexico.[15] During the war he worked briefly for the Navy, and on other federal projects such as the Alcan Highway, Lake Texhoma, and Shasta Dam. Doty returned to the Region Four office in 1946 and two years later became regional architect. His post-war designs include the lodge at Hurricane Ridge in Washington's Olympic National Park (called the Public Service Building in the early 1950s) and the administration building at Joshua Tree National Park in Twentynine Palms, California.[16] The Olympic project featured designs for exotic wood carvings adorning the entrance to the lodge and an entire lobby full of furniture. Its fancy woodwork aside, the building was built of reinforced concrete walls with wood paneling and sheet metal flat and shed roofs. Indian designs were stenciled above the south elevation of large plate glass windows. Aspects of the Mission 66 visitor center Doty would design for Hurricane Ridge in 1964 are not so different from the aesthetic employed at the lodge. These designs indicate that Doty and his Park Service colleagues were already moving in a progressive direction; although the specific attributes of the visitor center had yet to be developed, the prevailing influence was definitely modern. In the early 1950s, Doty was promoted from Region Four architect to designer; in

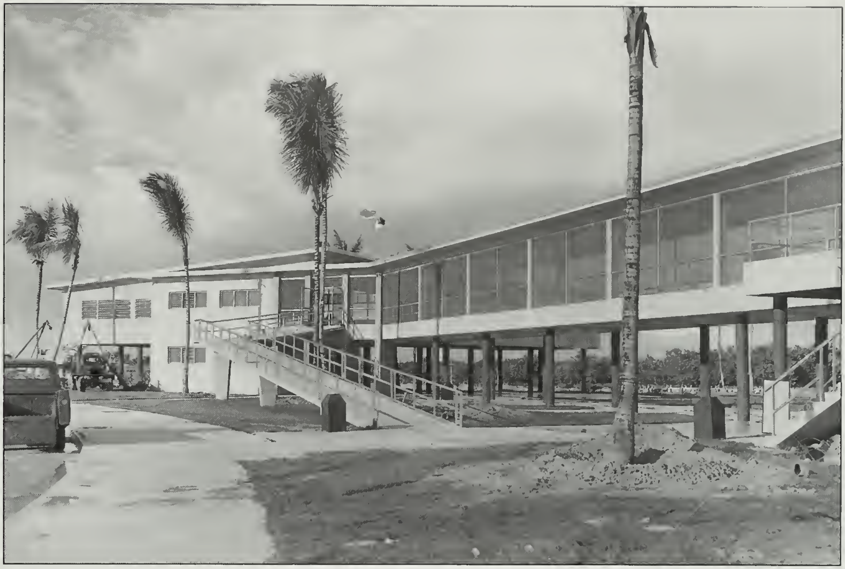


Figure 68. Flamingo Visitor Center and Restaurant, Everglades National Park, 1958. Photo by Jack E. Boucher.

1954 he followed Sanford Hill to the Western Office of Design and Construction in San Francisco.[17]

Just before the Park Service's next major reorganization, Doty designed a complex of public service buildings for Everglades National Park called Flamingo Marina.[18] Although the design included a Park Service administration building, it also featured a lodge, restaurant, gas station, and an elaborate dock into Florida Bay with facilities for cruise boats. Buildings were modern—concrete block, flat roofs, swirling concrete ramps, and terraces supported by thin columns. Patterns of louvered windows and perforated concrete screens provided ornamentation. Flamingo Marina is a resort of the type that became ubiquitous on the nation's beachfront in the 1950s and 1960s. Although Doty mentioned "a major change," reducing the size of the Park Service building at Flamingo and some alterations to the restaurant, the compound was built basically as designed. The marina project suggests that the Park Service began equipping parks with facilities to accommodate increasing numbers of visitors in the early fifties. As a development program, Mission 66 hoped to supply facilities to encourage public use, even if this meant boating in the Everglades and skiing in the Rockies.

Doty's first major design for WODC, the public use building at Grand Canyon, has already been discussed as a prototype for the visitor center. According to museum specialist Ralph Lewis, Tom Vint and Cecil Doty

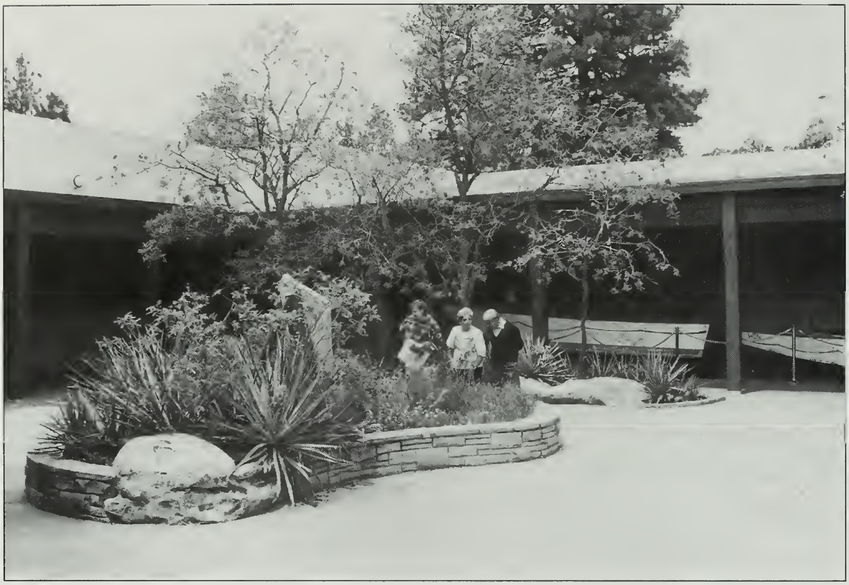


Figure 69. The interior courtyard of Grand Canyon Visitor Center, 1998. Courtesy National Park Service.

visited the Grand Canyon in July 1954, and Doty "began to design preliminary floor plans on the spot."[19] His design is most interesting, in retrospect, as an illustration of the transition from a simple program to one with more sophisticated requirements. The Grand Canyon building borrows the Santa Fe office floor plan, but incorporates modern facilities, such as an auditorium, into a more free-flowing version of the traditional courtyard layout. Despite its unified plan, the public use building looks more like a factory than the southwestern building style it tried to modernize. The two-story office space does not modulate the facade, as in Santa Fe, but rather adds an industrial feeling to the white-walled building. Efforts to moderate the harshness also mark this as a transitional building—exterior stone walls and flagstone are brought inside the lobby space; the exterior features large masonry columns; the courtyard is lined with a covered walkway supported by columns tapered on the side and includes native plantings. Although Doty obviously made an effort to temper the modernist style, his concessions seem tacked on. The building would appear more comfortable stripped of its rustic trappings. The public use building at Grand Canyon was clearly an experimental building, and, along with the similar facility at Carlsbad Caverns, defined the emerging model visitor center.[20] Both buildings were retrospectively renamed visitor centers. With the guidance of Vint and Lyle Bennett, Doty was instrumental in developing a modern visitor center design that would fulfill the programmatic demands of Mission 66.

Despite the shocking transformation in architectural style exhibited at the Grand Canyon, Doty understood that Mission 66 architecture evolved within the Park Service tradition: "Most of what we see . . . was the work or direction of Tom Vint and Herb Maier. To me Vint, Wirth, Maier, (Hillory) Tolsen, (Dick) Sutton, (Sanford 'Red') Hill was the Park Service." Like Maier, Vint had made his career supervising the design of some of the landmarks of rustic architecture; the office he headed in the 1920s developed the Park Service Rustic style. But after the War, rustic no longer satisfied park requirements, either in terms of function or aesthetics. As Doty explained, he and his colleagues had witnessed some of the nation's great technological and engineering achievements—the Empire State Building, Radio City, and the Chicago World's Fair, not to mention the advent of television, the motion picture, and the origins of space travel. When questioned about this in an interview, Doty responded with his own question: "How could you help but go away from that board-and-batten stuff?"[21]

CHARACTERISTICS OF A DOTY DESIGN

Although Doty's drawings of visitor centers exhibit a distinctive rendering style, it is impossible to distinguish between his contributions to the Mission 66 building type and those developed by the Mission 66 design staff. Nevertheless, Doty's buildings share certain attributes: a sensitivity toward location; a compact plan incorporating standard visitor center elements; the use of modern materials combined with wood and stone; and the impression of modesty that comes from a limited budget. Although locations may have been chosen by Park Service planners, Doty attempted to establish a relationship between the building and the landscape. In some cases he emphasized circulation through the building to an exterior view; other structures were designed around glassed-in observation decks. Every Doty plan incorporated basic visitor center elements, including exhibit areas, audio-visual rooms, auditoriums, restrooms, and lobbies. Doty juxtaposed these spaces and combined two or more in small visitor centers to accommodate limited programs. Financial circumstances dictated aspects of the program throughout the design process, restricting square footage, choice of exterior and interior surfaces, and the extent of exhibit facilities, among other features. In most of his designs, Doty masked the inexpensive nature of his buildings with aesthetic choices, such as the use of finer materials around the entrance area.

If practical considerations often favored the utilitarian, Doty was certainly aware of the status bestowed upon the visitor center, both by the Park Service and by tourists who were directed to the facility upon entering the park. Recalling Vint's assessment of the visitor center as "the city hall of the park," Doty expressed his belief in the architectural importance of these public buildings. Visitor centers represented the Park Service's highest ideals, and they provided essential services. Doty hoped that his visitor centers would also exude a sense of pride in their surroundings—inspiring the Park Service to maintain the buildings and the public to refrain from littering or other destructive behavior. Even as he strove for the equivalent of civic monuments within the park surroundings, however, Doty realized that funding limitations would always curtail the Park Service's aspirations, sometimes even before projects reached the drawing board. The need to conserve and compromise was integral to Mission 66 design and would prove to be Doty's greatest challenge. Nevertheless, Doty's commitment to architectural excellence extended to every facility—whether visitor center or utility building. Even functional structures hidden from view were judged by aesthetic standards: "do you like it, does it please?"[22] The following sections discuss how Doty used architectural aesthetics to fulfill Mission 66 requirements in his visitor center designs.

Circulation and Organization

Doty considered the visitor center that he designed for Zion National Park, Utah, in 1957 one of his best, perhaps because it combined several of his most effective methods for organizing spaces and providing efficient circulation between them. Many of the features used so well at Zion were prominent in his later buildings: the central skylight, the two-story office wing, and the rear viewing terrace. The fact that, many years later, an expanded bookstore area would compromise the lobby space is also, unfortunately, characteristic of many of these buildings. The Zion facility is divided into a visitor center area and a two-story administrative wing that can be entered from the rear, an arrangement similar to that of the Headquarters at Rocky Mountain and Colorado National Monument's visitor center. This design strategy successfully segregates visitor traffic from administrative areas, while aesthetically highlighting the building's public service function. Visitors rarely notice the office wing, as their attention is directed from the parking lot to the exterior restrooms and lobby entrance. The administrative aspect of the building is not part of the visitor experience.

The Zion Visitor Center combines the idea of walking through the building to a viewing area with the central "hogan" skylight, both of which were also used a few years later at Wupatki National Monument near Flagstaff, Arizona. Whenever possible, Doty framed views to help

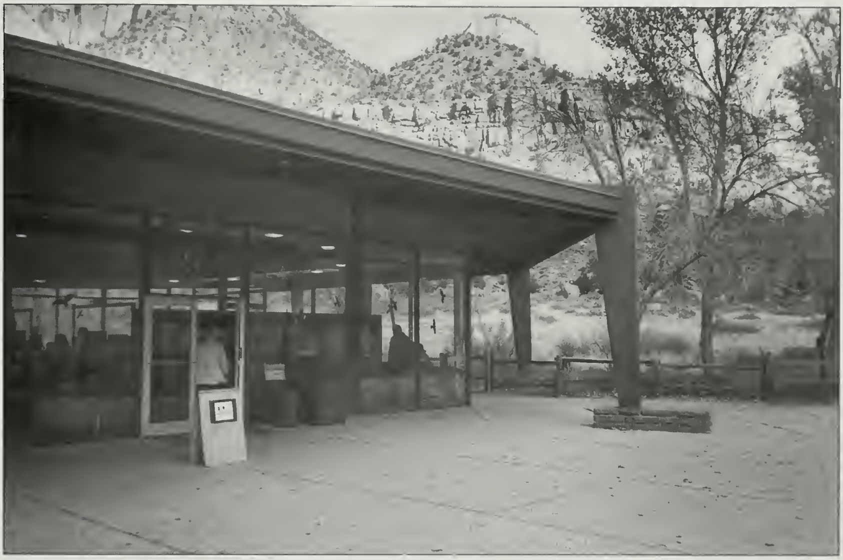


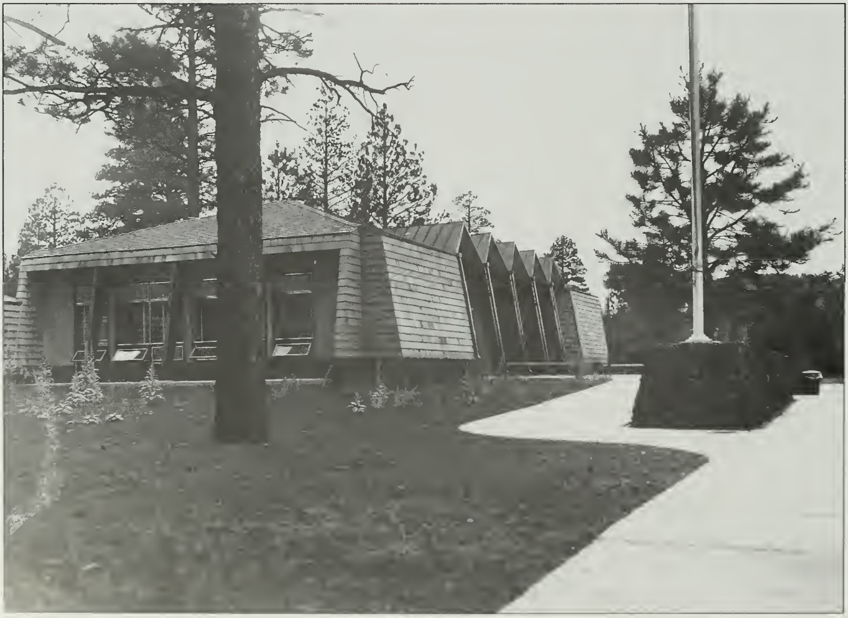
Figure 70. Zion Visitor Center in 1998. Courtesy National Park Service.

determine visitor circulation and give additional functional meaning to a building. At Organ Pipe Cactus in Arizona, Doty encapsulates the view of the park with glass front and rear facades. Colorado National Monument encourages the visitor to walk through the building for a dramatic glimpse of the canyon. Even the stark Canyon de Chelly Visitor Center in Arizona, located away from the monument's featured canyon, includes a viewing terrace; the surrounding landscape did not have to be the most dramatic of the area to require an outdoor porch. This arrangement was also used for the Madison Junction Visitor Center at Yellowstone, where visitors entered the porch and then passed from the lobby to a wood deck called the "view lobby." To the left of the entrance space was an exhibit area and to the right, an auditorium. The visitor center at Mount Rushmore (now demolished) was one of the few examples featuring a path bypassing the lobby. Visitors could proceed directly to the view terrace and enter the building from the exhibit room.

Although Doty often creates pathways through his buildings, he also assumes that the visitor's first stop is the lobby—the location of the information desk, maps, and other orientation material. Additional services, such as the auditorium and exhibits, are more or less subservient to this central space. Sometimes, Doty treats these areas as entirely separate rooms, but, more frequently, he uses a free-flowing plan to blur the boundaries between the various service areas. The exhibit space at Montezuma Castle in Arizona blends into the lobby; at Canyon de Chelly, only a half-room partition separates the video presentation area from the museum. Upon entering the lobby of Colorado National Monument, one naturally turns right to examine the exhibits. The Hoh Visitor Center in Olympic National Park treats lobby and exhibits as a single entity. Because of its larger size, Zion houses its museum and auditorium in completely enclosed rooms separated from the information desk. A similar arrangement is used at the Death Valley Visitor Center, where the auditorium and exhibit space flank either end of the lobby. This building is loosely arranged around a courtyard, the visitor half of which is owned by the state of California. Although located just across the courtyard, the administrative wing is Park Service property.

As if to prove that his plans depended on many factors, Doty designed two visitor centers with unusual programs in the final years of Mission 66. The visitor center at Sunset Crater, Arizona, located some distance from the crater itself, is the simplest possible in terms of circulation and use. It is essentially one big room with offices on one end and restrooms on the other. No effort is made to obtain a view or direct the visitor outside. Just a month later, Doty designed a complex of three "huts" for Center Point in Curecanti, Colorado. Although this visitor center

Figure 71. Visitor Center, Sunset Crater Volcano National Monument, near Flagstaff, Arizona. Courtesy National Park Service Technical Information Center, Denver Service Center.



appears to function as three distinct buildings, interior areas are linked. One corner of the lobby leads into the exhibit space, the second of the three square huts. Restrooms are attached to this area but entered from the outside. The final hut is an office wing entered from behind the information desk in the lobby. This portion of the visitor center is partitioned into several offices and work spaces.

As much as one would like to isolate various types of Doty visitor center plans based on location and regional requirements, there is no standard pattern. Emphasizing the relationship between inside and outside—bringing the outdoors in—was a characteristic of Doty design, but it was also common to modern architecture in general. Like the flow diagrams drawn up during design conferences, Doty's plans shuffle components according to many factors, not the least of which was budgetary. The architect himself was quick to acknowledge that design ideas often entered his head for no reason at all. Behind all of Doty's work, of course, was not only an architectural background, but a lifetime influenced by extreme social and technological change.

In a presentation at the WODC conference on visitor center planning of February 1958, Doty articulated his ideas about visitor center design using "space relationship diagrams" of Badlands National Park and Theodore Roosevelt National Park, two sites of current interest. As Doty explained, traffic flow diagrams were most useful in the early stages of planning, when the architect was engaged in the initial three steps: considering traffic through the entire park, analyzing flow in the visitor center zone, and planning for the parking area and visitor center itself. Circulation through the building should be clear without posted signs. "If the circulation is simple and obvious, and space is adequate, then clockwise, or counter-clockwise flow, locations of information counters, etc., become somewhat incidental."[23] Doty's diagram's illustrated his belief in free-flowing movement through buildings with arrows indicating entrances and shaded areas showing circulation in any direction. The "lobby," "exhibits," and "audio" were analyzed according to the percentage of space devoted to various activities, including viewing, standing, displaying information, and circulation. Although Doty's conference presentation suggests a calculated approach to design, this methodology was probably not intended as an architectural model, but merely as a guideline for more flexible planning.

STYLE AND MATERIALS

Both in terms of theory and practice, modern architecture involved new materials and new uses for old materials. Steel and concrete were not modern materials per se, but, when deliberately exposed and exploited, they became part of the modernist aesthetic. Steel frames and concrete shells allowed lobbies to become open areas unobscured by load-bearing walls. The most significant adaptation made by Park Service architects, after compensating for view terraces and observation areas, was in the treatment of materials. Doty and his colleagues always mingled traditional materials, like stone and wood, with steel, concrete, and glass. This mixture of old and new followed the Park Service's tradition of "harmonizing" with the landscape, sometimes in a deliberate attempt to establish continuity between existing rustic structures and modern additions. If this conservative combination of materials did not stretch the boundaries of the modern style, it did result in some distinctive park buildings.

The Zion Visitor Center featured both canyon-colored brick and masonry and tapered steel columns encircling entire walls of glass. At Sunset Crater, sawn shakes and a water table of volcanic rock clashed with the glue lam framing, crinkled roof, and tapered columns. The visitor center at Tonto National Monument in Arizona, for which Doty prepared both preliminary and working drawings, incorporated laminated beams and glass paneled walls in an upper deck. One end of the east elevation was stone veneer over concrete, the other stucco on concrete blocks. Death Valley featured porcelain metal louvers on the east elevation, the same Lemlar brand used in the office wing at Gettysburg, and Organ Pipe Cactus included concrete block screens similar to those popularized by Edward Durell Stone. Lassen Volcanic was rustic in outline, with its pitched roof suitable for alpine climates, but the roof was metal and supported by laminated beams. The Navajo Visitor Center in Arizona was a flat-roofed rectangular building with a front facade of native stone and glass and a sign of "rough-sawn" lettering. Park Service architects did not simply build modern structures; they incorporated many of the most blatant features of modernism, including the tapered column, aluminum-framed window wall, and concrete block screen. In most cases, they felt obliged to temper such choices with traditional building materials.

Although many Mission 66 visitor centers provide clues to their origins, usually in exterior masonry patterns, window frames, and roofs, the visitor center at Canyon de Chelly might have been built yesterday. The functional brick structure offers no obvious indication of a date. On the inside, however, period museum exhibits suggest its Mission 66 vintage. In this case, limited means resulted in a building that not only appears timeless, but has actually become more appropriate for the surrounding landscape over the years. The road to the building takes the visitor through the Navajo Nation Indian Reservation. Buildings on the reservation range from public housing projects, modular and mobile homes, to homemade cabins and traditional hogans. The utilitarian visitor center is more appropriate here than anything alluding to ancient civilizations, especially since Native Americans still farm land on the valley floor.

If the Canyon de Chelly Visitor Center did not boast dramatic modernist columns or glass walls, its very simplicity demonstrated Doty's increasing comfort with the modern style as the Mission 66 program entered its final years. In preliminary (unbuilt) projects for Cabrillo National Monument (1963-1964) in San Diego, and Cedar Breaks National Monument (1965) in Utah, Doty designed modernist facilities with expansive glass-walled viewing decks overlooking the sites. The buildings resemble ocean liners, at least in elevation. The only ornamentation was provided by clay grilles at Cabrillo and the pattern of concrete block and aluminum sun baffles on the facade of Cedar Breaks. An observation deck at Cabrillo featured a band of windows surrounded by concrete, like a control tower, while the Cedar Breaks observation area was floor-to-ceiling windows that alternated between sash and pivot. Although neither building demonstrates major changes in terms of plan or circulation, these later visitor centers show a significant adjustment of aesthetics. The modernist style is no longer covered with a "rustic" veneer or tempered by natural wood details. At Cabrillo, the "mission tile color" of the grilles appears to be one of the few concessions, while Cedar Breaks includes a "large rock" adjacent the square metal columns marking the entrance.

Doty used the compact, minimalist aesthetic for some of his later designs, but others boasted dramatic cylindrical forms fashioned of poured and cast concrete. Among such projects were proposals for visitor centers at Glen Canyon Dam, Mesa Verde, and Natural Bridges, all of which incorporated cylindrical elements into their plans. The Glen Canyon building, designed in 1963-1964, consisted of a rectangular wing with offices and visitor services attached to a cylindrical "observation and display" space and exhibit area. In elevation, the cylindrical observation room was emphasized by an overhanging flat roof, like a plate, with a central skylight housed in a much smaller cylinder. The visitor spaces at Natural Bridges (1964) were arranged within an oval. Concrete arches over the cylindrical area add to the feeling of free-flowing space. Masonry veneer, a split-block wall section, and wood trim were included in the decor, but the dramatic concrete shell was hardly influenced by such details. Just a few months later, in August, Doty employed the cylindrical form in an exhibit space placed within a roughly triangular lobby and audio-visual area. Offices and concessions were contained within a rectangular wing perpendicular to the lobby. The cylindrical form of the exhibit hall was mirrored in the round shape of the front terrace. The use of cylindrical forms has no apparent relationship to the site conditions; in fact, previous designs might have used the shape to greater advantage for panoramic views in many locations. It's likely that Doty had become increasingly interested in stretching the possibilities of steel and concrete construction. By 1964 Park Service Modern had become a style, and Doty was free to take more risks in its execution.

THREE SOUTHWESTERN VISITOR CENTERS

During the Mission 66 program Doty designed visitor centers for a range of climates and locations, according to varying needs and anticipated visitation. In some cases, he never visited the site, and in others, he executed final working drawings. Rather than compare such a divergent group of designs, this section will look more closely at three small visitor centers in Arizona, all serving as the gateway to ancient ruins. In the design of these modest buildings for relatively obscure parks, Doty shows his versatility in adapting to site conditions. At Montezuma Castle and Wupatki Ruins, the buildings are located on pathways to the ancient structures. Doty had no choice but to build at the edge of Walnut Canyon, where an existing building provided the foundation for his modern addition. The three visitor centers illustrate the extent to which terrain and natural surroundings influence the perception of modern park buildings. Modern architecture is most successful in places where the site obscures and overwhelms—such as Montezuma Castle—and when it clearly uses modern technology to advantage by providing more dramatic viewing opportunities—such as Walnut Canyon.

The visitor center at Montezuma Castle, designed by Doty in 1958, is so shaded by native trees and the adjacent hillside that architectural style is hardly an issue. In this design, Doty had the foresight not to place the building in an open clearing, but to wedge it into the canyon, longwise. The visitor follows the path from parking lot to restrooms, and then continues to the lobby entrance. The information desk is to the right of the door, but open to the entire space, which includes a sales area and exhibits. Park offices are entered from behind the desk. The dark, enclosed space seems appropriate in this narrow site, and actually pushes the visitor towards the far end of the lobby, where a door leads out to the ruins. A concrete path winds the half mile to the ruins and continues in a short loop around the canyon. The visitor center includes an adjacent terrace with serpentine curb that overlooks a shaded picnic area. The terrace was paved around trees, which now appear to grow from the concrete. On paper, the flat-roofed metal-and-glass building appears a quintessential modernist facility, but in fact, the building is a remarkable example of how modern architecture can actually fade into the background. Little needs to be said about Walnut Canyon—a visitor

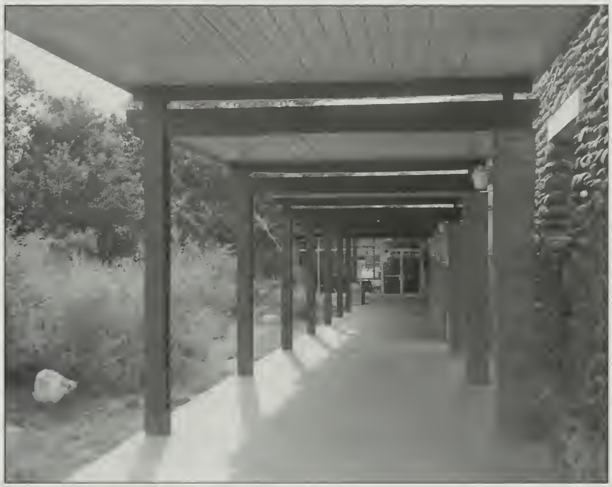


Figure 72. Entrance to Montezuma Castle Visitor Center, 1969. Courtesy Technical Information Center, Denver Service Center.

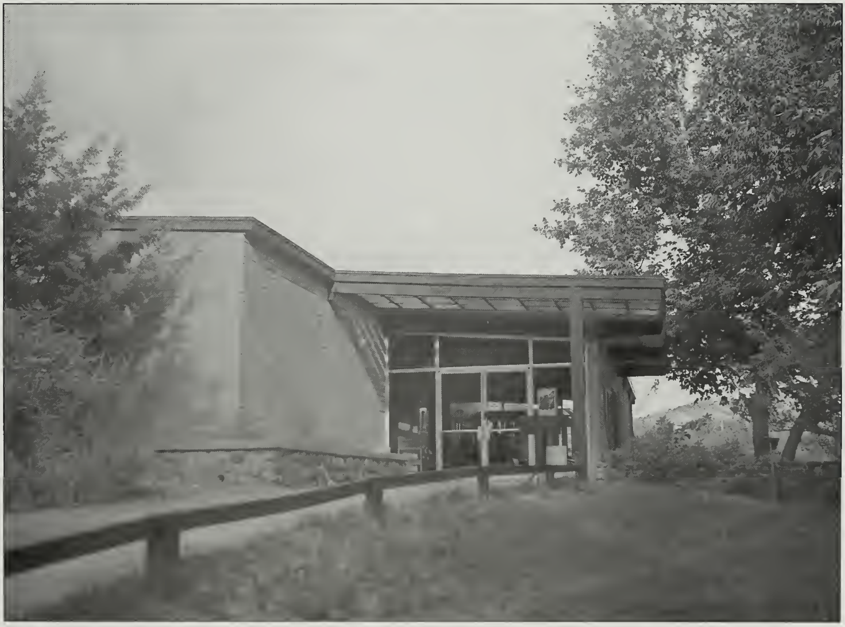


Figure 73. Montezuma Castle Visitor Center, rear entrance and path to ruins, 1969. Courtesy Technical Information Center, Denver Service Center.

center almost impossible to photograph—because it so deliberately and successfully attracts little notice.

At Wupatki Ruins, Doty confronted a more open, high desert landscape that he had studied before. Wupatki is one of several sites in northern Arizona featuring significant ruins of ancient Indian communities. Although most of these ruins are cliff dwellings, such as those hunkering down in the valley at Canyon de Chelly, Montezuma Castle, and nearby Walnut Canyon, the remains at Wupatki rise from a relatively flat area; the ancient settlement's free-standing walls stand exposed upon the rocky high desert. In the early 1940s, Doty had designed a small administration building at the monument. His solution to the siting problem involved constructing the building up against a nearby rock formation. This early design was considered an extension of an existing residential building, even though a patio separated the structures. The new visitor center was to be an enlargement of this early administrative facility. In his original design, Doty had cultivated the familiar southwestern theme, creating a rough masonry building with carved wooden corbels under the eaves, exposed vigas, and canales. His Mission 66 addition effectively obliterated the older building, as it shifted to an abstract version of Native American architecture, imitating both the nearby stonework and the traditional methods of residential construction. The "hogan" shape of the lobby with its central skylight was a reoccurring spatial motif in Doty's visitor centers. Along with its relatives the kiva and teepee, this glass-covered cone was considered appropriate for many situations involving Indian heritage in western and southwestern states.

In May 1957, several years before Doty arrived on the scene, Wupatki mounted a promotional Mission 66 display. The introductory panel explained that, "in this exhibit Wupatki will be used as an example of what needs to be done in Arizona and throughout the United States Parks and Monuments."[24] Successive panels commented on the importance of Mission 66 as a method of preservation.[25] Finally, in November 1961, Doty visited the site in preparation for the long anticipated visitor center, scheduled for construction in 1963.[26] Six months later, Superintendent Russell L. Mahan praised "Architect Doty, WODC" for submitting an excellent floor plan. Mahan approved the preliminary plans with only minor suggestions and looked forward to the start of the spring construction season.[27] In December, Park Service representatives from the WODC and architects Leslie J. Mahoney and R. Gilman visited Wupatki to discuss the site and potential building materials. The firm of Lescher and Mahoney, Phoenix, which received the contract for final drawings, had already completed similar work for the Park Service at Organ Pipe Cactus, Arizona, (1956-1958) and was involved in the additions and alterations at Casa Grande (1962-1963).

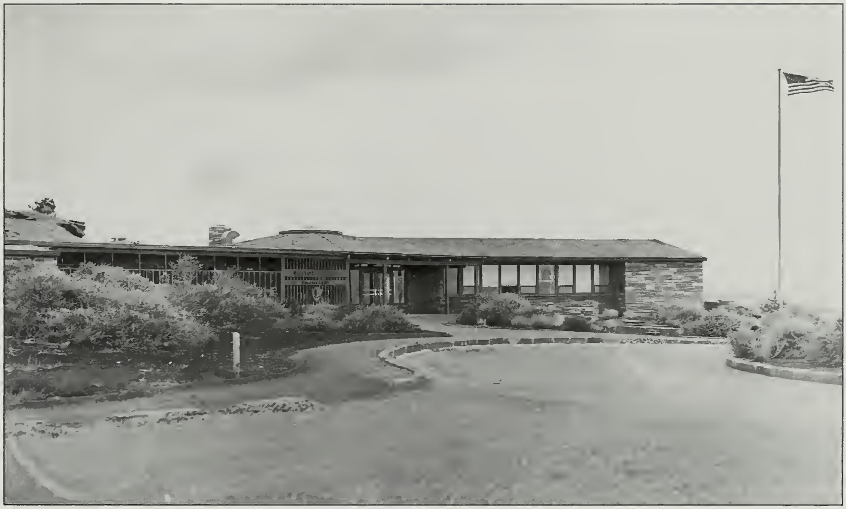


Figure 74. Visitor Center, Wupatki Ruins, near Flagstaff, Arizona. Courtesy National Park Service Technical Information Center, Denver Service Center.

Bids for the construction of the visitor center were first opened in July 1963, but higher than anticipated costs forced the park to delay the bidding process until September.[28] Work began on July 6, and, by end of month, footings had been poured and forming begun on foundations.[29]

The design of the visitor center at Wupatki Ruins is an excellent example of how the Park Service typically handled small Mission 66 projects at the height of the improvement program. Doty sketched two sheets of preliminary plans and the contract architects filled in the details. Whereas Doty simply labeled the central space "lobby" and "exhibits," separated by "skylites," Lescher and Mahoney indicated precise measurements, wall panels, construction details, and the 4,905-foot elevation. Although Doty's sketches give a better sense of the final building, the architects' plans provide the contractors with the information to actually build it. Like most of the visitor centers protecting ancient ruins, the Wupatki building blocks the view of the featured attraction. A flagstone path leads to the front entrance and the restrooms, entered from a sheltered walkway to the left of the building. Immediately upon entering, the visitor confronts an information counter on the right, adjacent the office wing. The octagonal lobby is illuminated by a central skylight divided by a partition separating exhibits from the sales area. Doors at the far end of the room lead to a flagstone patio and path to the ruins. The information counter stands guard next to the office wing, equipped with space for rangers, clerical work, and the superintendent's office. The park's historical archives are stored in part of the old building at the end of the path leading to the restrooms.

From Doty's drawings, one imagines an even more modernistic building than that actually built. The exterior appears covered by a wall of vertical louvers, the office windows are severe; in plan, the central serving area and office appendages suggest a complicated building program. Actually, the Wupatki Visitor Center is small, simple, and understated. It fits in nicely with the nearby residential buildings and surrounding landscape, in part because one side of the building is pushed up against the rock hillside and existing administration building. Inside the lobby, the architect specified paneling of warm, western pine and a cedar information desk. Wupatki illustrates the positive and negative aspects of the Mission 66 plan. In achieving the goal of a simple architectural style with little impact on the landscape, Mission 66 designers created buildings almost too plain to criticize. They fulfill their function within budget, but hardly inspire. And yet, Doty's plan manages to use the original building—essentially a basement in the hillside—without inheriting the gloom and dank of this space. The Mission 66 goal was to solve the problems of visitor service and circulation, after all, and these requirements are certainly satisfied.

The Mission 66 visitor center at Walnut Canyon was also an addition to a building designed in the CCC era. During the planning phase, Doty and Vint visited the old building on the edge of a valley overlooking an intricate series of cliff dwellings. Doty remembered enthusiastically "talking about how you could do this and you could do that [with a new building]." Vint reminded him of the visitor center's practical function, which was not intended to showcase an architect's skill.[30] With this advice in mind, Doty went on to transform the older building with a glassed-in observation deck. The visitor center at Walnut Canyon took advantage of its site by bringing the visitor from the entrance down stairs to the lower viewing level, a series of terraces that imitated the natural surroundings. From here, the visitor confronted the spectacular canyon, as well as outdoor viewing opportunities.

More than the Wupatki addition, the extension of the administration building at Walnut Canyon allowed for an advantageous use of modern architecture in the expansive lobby viewing area. In cases such as these, the modernist style extended the boundaries of a space, actually opening up a window on the site. However, when such opportunities didn't present themselves, it was difficult to create a visually interesting building. Rustic architecture had the advantage of incorporating a certain amount of fantasy into its walls and appealing to stereotypes of the wild, rugged West. The rejection of this style also represented the beginning of a more serious attitude towards preservation and interpretation. Park Service Rustic was the architectural equivalent of "living history," a method of visitor entertainment the Park Service hoped to substitute with informative literature and educational programs. The very roots of

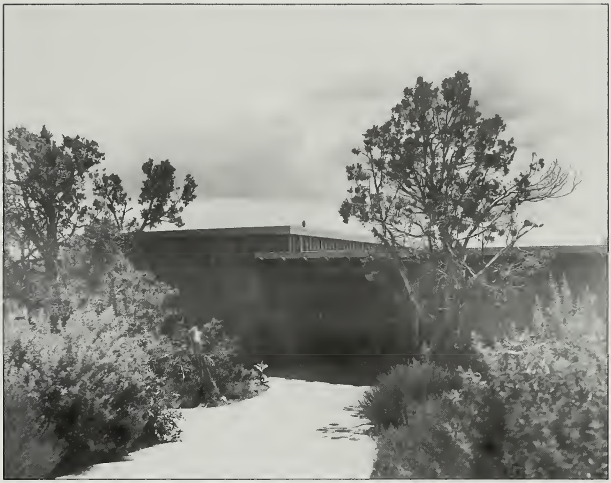


Figure 75. Visitor Center, Walnut Canyon National Monument, near Flagstaff, Arizona. Courtesy National Park Service Technical Information Center, Denver Service Center.

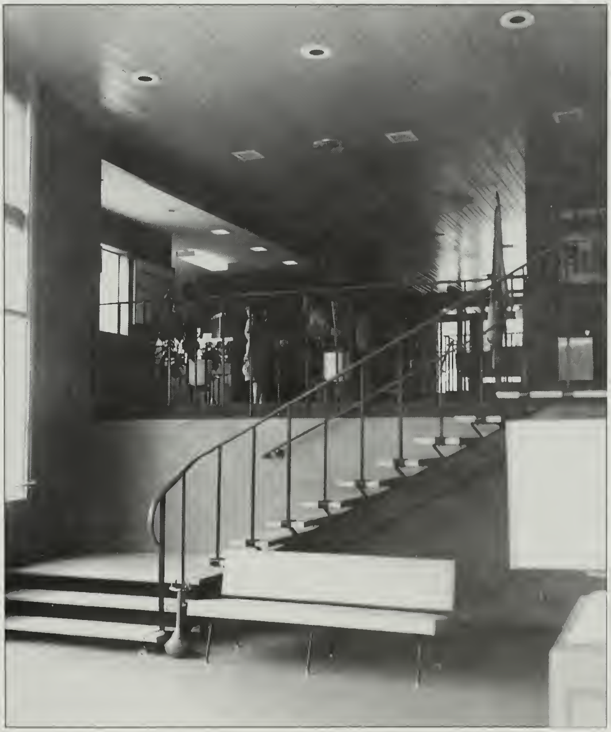


Figure 76. View of lobby from observation area, looking towards entrance, Walnut Canyon National Monument. Courtesy National Park Service Technical Information Center, Denver Service Center.

modernism were founded in standardization, the attempt to create mass-produced housing for example, and, as a style, its use mirrored the Park Service's massive effort to provide adequate visitor services at every national park.

Zion Visitor Center

> A cottage cannot be transformed into a skyscraper merely by adding story upon story. Zion cannot be equipped to serve doubled and redoubled numbers of visitors merely by expanding existing facilities in their present location.[31]

Planning for a new visitor center at Zion National Park began a decade before the Mission 66 program. During the 1940s, the park accepted proposals for a new museum to replace the existing one-room facility. Since its establishment in 1919, the park had more than doubled its visitor population every ten years. The museum at the juncture of the main highway and the Zion Canyon spur road was a desirable stop for visitors entering the narrow canyon area, but overcrowding and traffic jams had become such a problem that many were denied the opportunity. In its 1951 master plan, the park suggested a combined

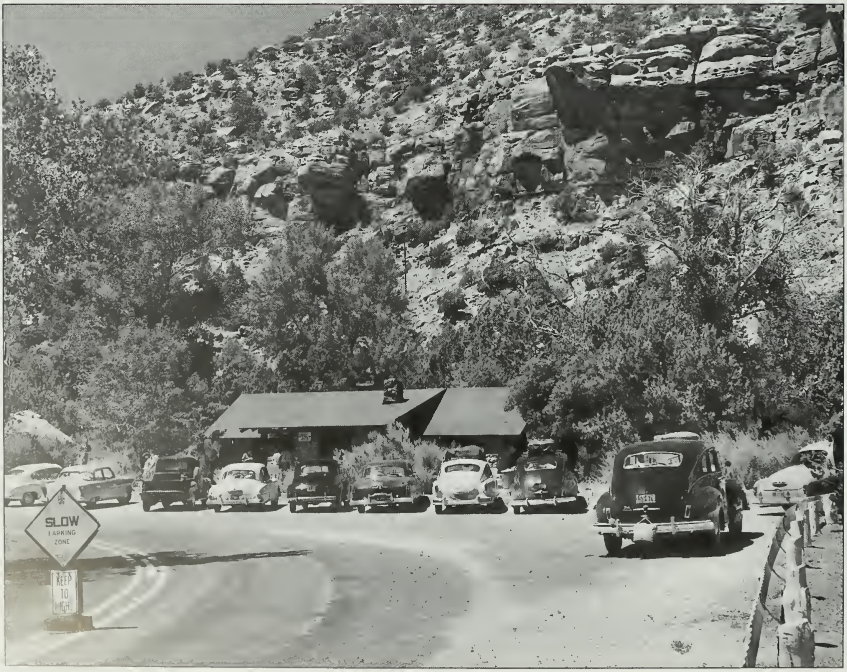
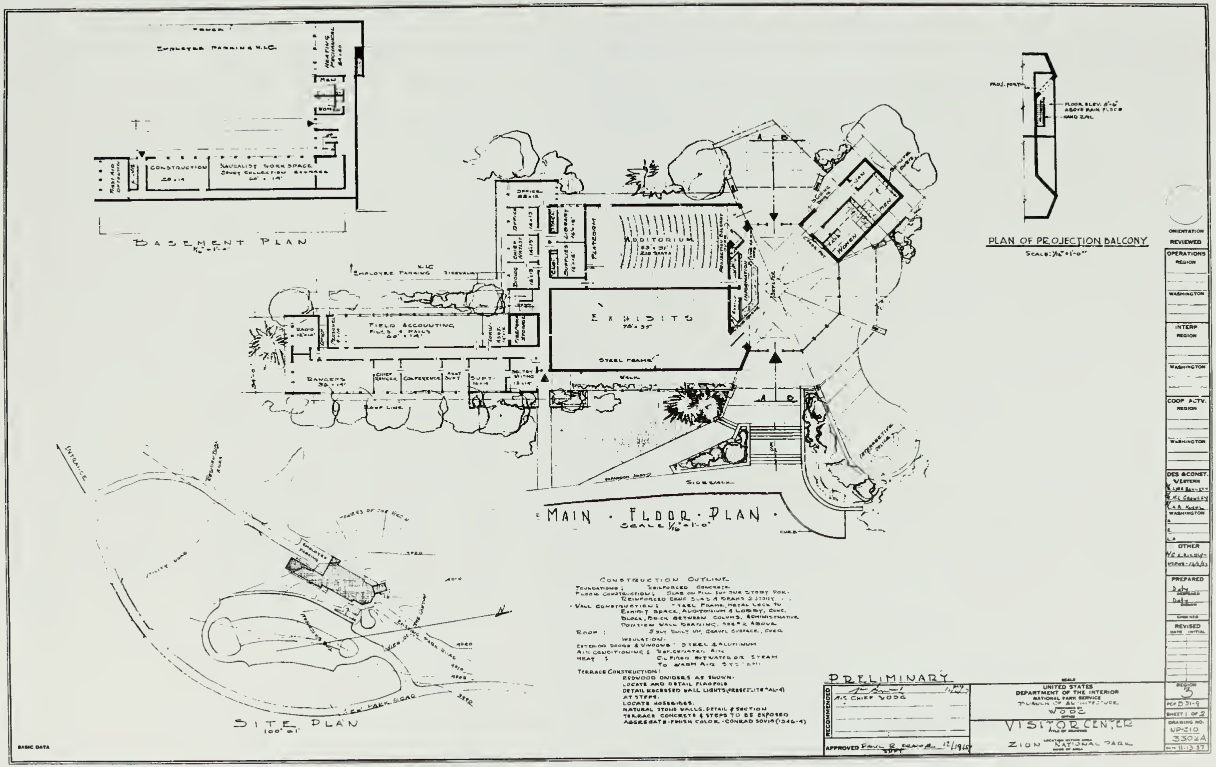


Figure 77. The Zion Museum, n.d. Courtesy Zion National Park Archives.

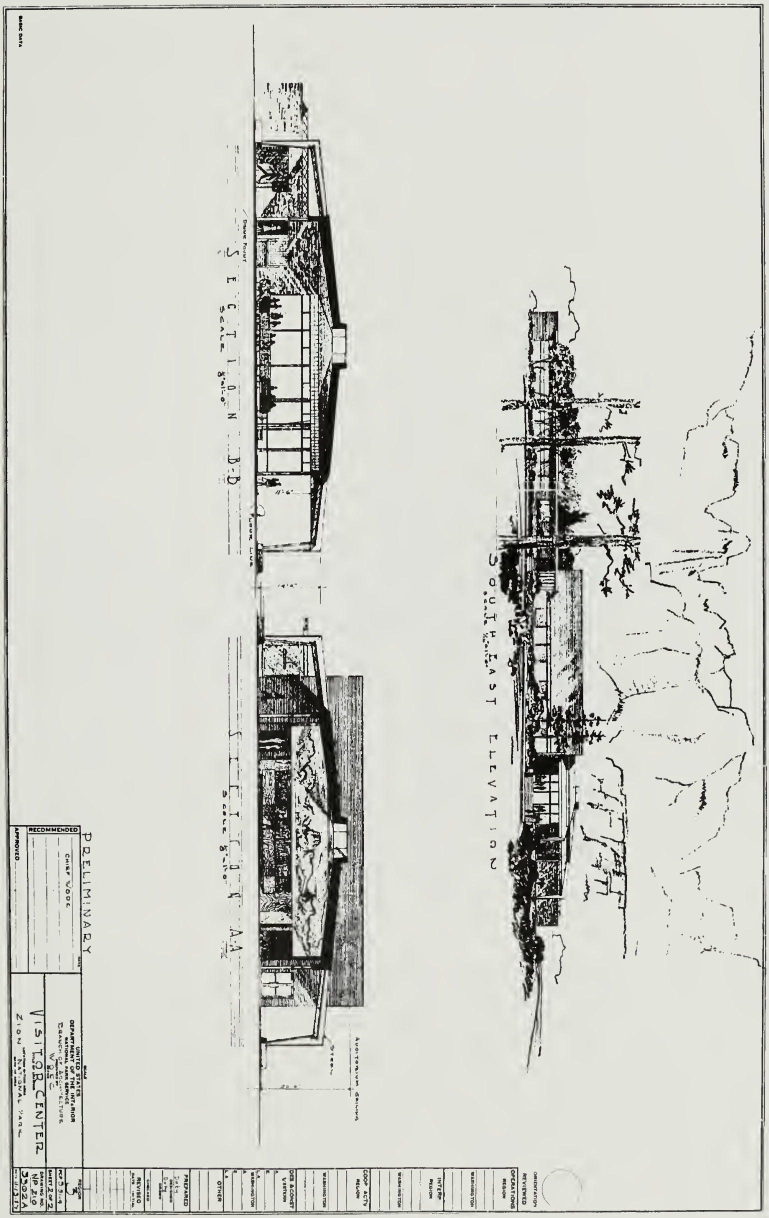
museum and administration building that would concentrate both the public and the staff offices in a single location. Such an expensive project hardly seemed possible at the time. But park planners became more optimistic during the summer of 1956, when President Eisenhower signed a bill expanding the park. The Kolob (western) section was then opened to the public and funds were provided to purchase several inholdings. Work began on the West Rim Trail in 1957.[32]

When Mission 66 funding and planning came to Zion National Park, discussion focused not on whether a new building was necessary but on where it should be located. The park's Mission 66 prospectus described a facility outside the crowded canyon. Along with the construction of this visitor center at the south entrance of Zion Canyon, the park proposed a new road into the Kolob canyons. The new access was to be designed with pull-outs and interpretation to encourage visitors to explore, picnic, and linger in the area. Cecil Doty began preliminary studies for the visitor center in October 1956, before a site location had been finalized.[33] The next spring, the park sent studies and recommendations to the WODC and Region Three office. Robert Hall of the WODC and Merel Sager of the Washington office met with Superintendent Paul Franke in May 1957 to discuss "an alternate site for the visitor center" suggested by Director Wirth. According to one oral history interview, the controversy over the location of the building lasted for over a year because Wirth favored locating the structure adjacent to the old museum. Superintendent Franke insisted that the canyon location was too crowded, both with visitors and geological formations. Mission 66 planning influenced the choice of a site outside of the main canyon, a site with its own natural beauty but one that would not detract from the park's featured scenic attractions.[34]

Any arguments surrounding the siting of the visitor center were resolved by November 1957, the date that Doty completed two sheets of preliminary drawings for a building off the south entrance road with a view of the canyon to the north and the Towers of the Virgin to the east. In elevation, the visitor center appears as three discreet sections: the steel and glass lobby area, the rectangular museum and auditorium, and the low office wing. The path from the parking lot leads to steps and a broad front terrace from which visitors enter the hexagon shaped lobby oriented toward scenic views. In contrast to the more conservative decor of the office wing, the lobby features modern details. Tapered, spider-leg columns support the overhanging roof; the lobby is almost translucent, its glass walls extending from floor to ceiling. Inside, a central skylight further dramatizes the effects of light and spaciousness. An information desk stands to the left of the skylight between the entrances to the exhibit space and auditorium. The restrooms are located on the north side of the lobby. Although this placement of the


BASEMENT PLAN
MAIN · FLOOR · PLAN
SITE PLAN
PLAN OF PROJECTION BALCONY
AUDITORIUM
EXHIBITS
FIELD ACCOUNTING
RANGERS
PLATFORM
LIBRARY
SUPPLIES
INFORMATION
SKYLITE
WOMEN
MEN
CONSTRUCTION OUTLINE
ENTRANCE
PRELIMINARY
RECOMMENDED
APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE
VISITOR CENTER
ZION NATIONAL PARK
NP-ZIO 3302A
BASIC DATA

Figures 78 (page 236) and 79 (page 237). Preliminary plans and elevations for the Visitor Center at Zion National Park by Cecil Doty, November 1957. Courtesy National Park Service Technical Information Center, Denver Service Center.


SECTION B-B
SCALE 1/8"=1'-0"
SECTION A-A
SCALE 1/8"=1'-0"
SOUTH EAST ELEVATION
FLOOR LINE
AUDITORIUM CEILING
STEEL
PRELIMINARY
RECOMMENDED
CHIEF WODC
APPROVED
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
VISITOR CENTER
ZION NATIONAL PARK
SHEET 2 OF 2
NP ZIO
3902A
BASIC DATA

restrooms blocks one segment of glass wall facing the canyon, it also directs traffic to the far end of the lobby. Black arrows on the original drawings indicate that Doty intended visitors to pass through the lobby to a framed view of Towers of the Virgin, the rock formation behind the building. Visitors were encouraged to walk out to the exterior viewing terrace, which wrapped around the lobby in a geometric shape that mirrored the facets of its walls.

In elevation, the exhibit and auditorium portion of the visitor center is a transition between the modern lobby and the more conservative office wing. The double-height auditorium section is concrete block, its facade only adorned by alternating light and dark panels. By using a pattern of panels similar to those of the office wing windows, Doty developed a more uniform façade, though he seemed intent on maintaining its austerity. The contract architects, perhaps in consultation with their client, would soften his crisp lines with ornamental details. Despite the steel, glass, and smooth surfaces, however, Doty specified the use of redwood dividers in the exterior terrace, which was to contain natural stone walls and surfaces of exposed aggregate.

Although visitors parking in the main lot are certainly aware of the office wing, the low, utilitarian appendage to the visitor center attracts little attention. Employees park in the rear of the building and enter from the parking lot. A naturalist's study collection, restroom, and storage rooms are housed in the basement. The main floor includes offices for the rangers, superintendent, and other administrators; a conference room; and storage for administrative records. The office wing extends from the visitor center exhibit space and along the back of the auditorium, forming an "L" shape. A short hall from the front entrance leads to hallways in both parts of the L and hidden access to the visitor center via the auditorium. The facade of the office wing is only decorated by a strip of utilitarian windows, the simplicity of which contrasts with the imposing double-height auditorium and dramatic glass and steel lobby. In his drawings, Doty masked the facade of the office wing with a series of trees and shrubs. The office wing appeared subservient to the visitor center in every way.

During the next year, Doty's design for the Zion Visitor Center was handed over to the architectural firm Cannon and Mullen of Salt Lake City.[35] Howell Q. Cannon and James M. Mullen worked as partners beginning in 1949 but both had experience as employees of the firm since the 1920s. Cannon (1908-), born in Salt Lake City, was educated at the University of Utah and received a bachelor's of fine arts from George Washington University in 1938. After working as a draftsman for Cannon & Fetzer for four years, he took a two-year European tour and then accepted a position as clerk and inspector of construction for the Architect of the Capitol in Washington, D.C. Beginning in 1938, Cannon supervised construction for Cannon and Mullen, overseeing work at the $400,000 U.S. Bureau of Mines Experiment Station in Salt Lake City. He was a member of the American Institute of Architects. The "specialties" listed in Cannon's resume describe him as an ideal candidate for Mission 66 contracts, with experience in "supervision of construction, architectural engineering work involving design of wood and steel and reinforced concrete stress members, specification writing, business contacts." James M. Mullen (1912-), also a native of Salt Lake, spent two years at the University of Utah and was licensed to practice in the state. He was employed by several local firms to design a wide range of buildings—including a hospital, housing project, Salt Lake Hardware and Warehouse, and St. Marks Hospital, Salt Lake City. From 1946 to 1949, he worked on several buildings for the Veterans Administration.[36]

The firm of Cannon and Mullen was well known in the state of Utah. As partners they designed schools, factories, municipal buildings, and churches, primarily in Salt Lake City, and had gained a reputation for solid, professional work. The architects were working in the modern style as early as 1939 when they designed the U.S. Bureau of Mines building on the campus of the University of Utah. The Bureau of Mines facility, now known as the HEDCO Building, is actually many buildings connected by ramps and intended to function as a single entity. Although hardly similar to a visitor center in terms of purpose or program, the HEDCO Building was a high-profile commission and would have been used to demonstrate the firm's skill and modernist design philosophy.

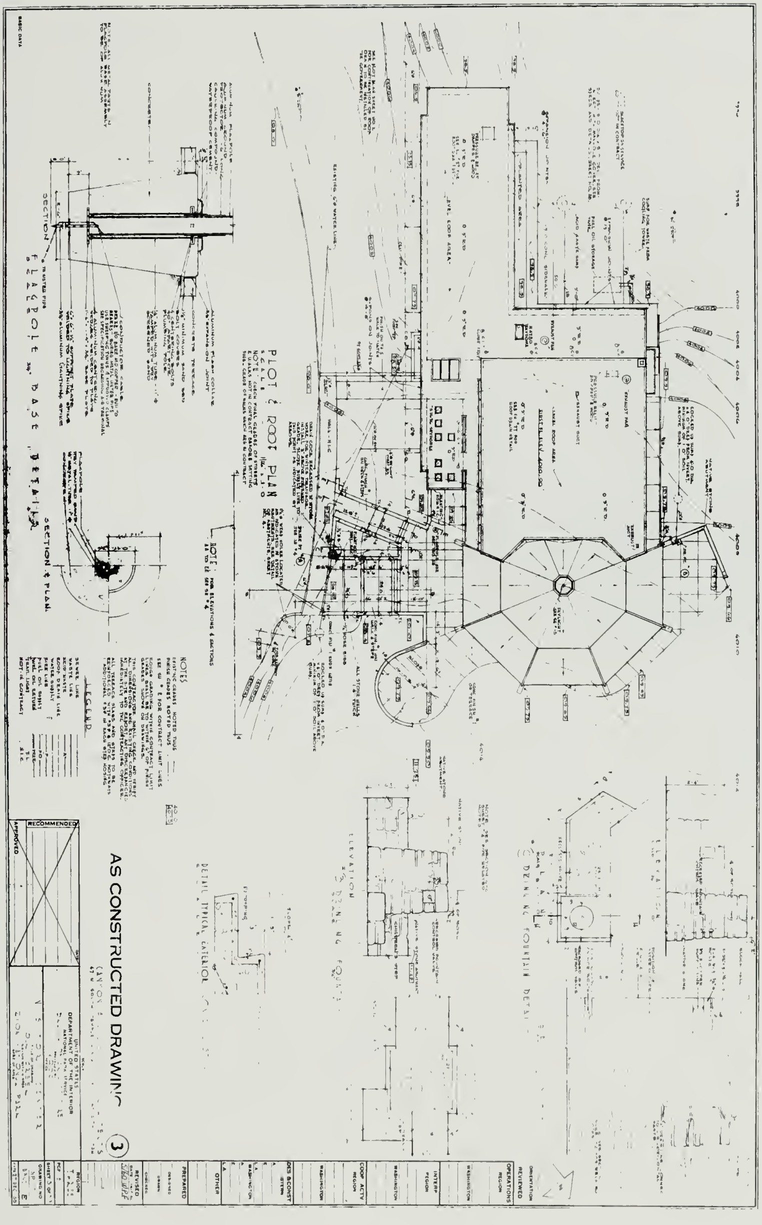
Cannon and Mullen began their employment with the National Park Service in 1958 at Bryce Canyon National Park. Their working drawings for the Bryce Canyon Visitor Center, which was also based on original designs by Cecil Doty, were completed in May 1958.[37] The Bryce and Zion visitor centers are only about twenty miles apart and both share the geography of Utah's canyonlands. Both buildings feature a large auditorium, exhibit room, and lobby for visitors and an office wing for park employees. Despite similarities in climate and program, the two visitor centers illustrate the range of aesthetics contained within the Park Service Modern style. The Bryce Visitor Center is a simple building with a flat-roofed lobby and a double-height auditorium and exhibit area behind. The lobby is distinguished by little more than glass entrance doors and floor to ceiling windows. A standard, single level office wing extends to the north. Doty's red brick building with redwood trim originally featured peaked roofs over the lobby and auditorium.[38] In a second preliminary design completed a few months later, he flattened the roofs, giving the building a more modern, streamlined appearance.

After developing a standard plan at Bryce, Doty was clearly more willing to experiment on a design for the more elaborate Zion facility.

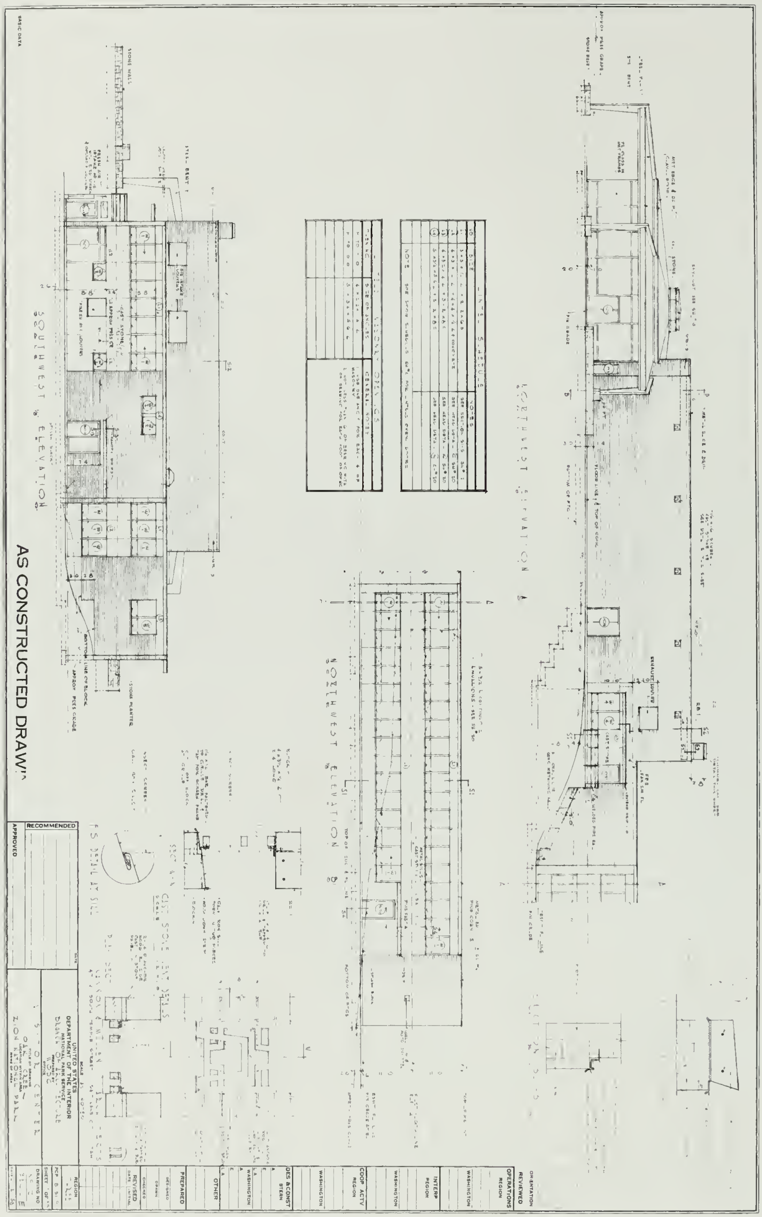
The Bryce Canyon Visitor Center commission gave Cannon and Mullen experience with canyon sites, the Park Service Modern style, and Doty's plans. When nearby Zion National Park required similar services, the firm was eager to continue its park work. The Zion Visitor Center was not Cannon and Mullen's most original commission—the design, after all, had been developed by another architect—but the execution of working drawings and supervision of construction did prove a creative challenge. The firm took Doty's preliminary sketch and construction outline and transformed his concept into a visitor center that could actually be built; the project required thirty-nine sheets of drawings. The major design change consisted of moving the restrooms from inside the lobby to the exterior of the building, where they became part of the facade. This arrangement was common to other visitor centers, such as Doty's facility at Colorado National Monument, and may have been advised by the Park Service. In any case, the as-built lobby proved a more effective space for viewing the surrounding canyon landscape and aesthetically complimented the building's modern style. The firm also attempted to mitigate the severity of the central section by adding cast stone vents along the top and covering the restroom walls with cast stone of a "large" aggregate. By choosing a random stone veneer of dark reds and browns, the architects created a clear contrast to the duller-colored, regular concrete blocks. Cast stone elements were specified for the lobby details, and drinking fountains were designed of native stone.

Bidding on the construction of Zion Visitor Center opened on February 19, 1959. Of the fourteen bids received, the lowest acceptable was submitted by Charles H. Renie of Moab, Utah, who planned to construct the building for $359,032. Renie visited the site in April accompanied by WODC Building Inspector Eugene Mott. By the end of the month, excavation for the footings was underway. The park reported "good progress" on the visitor center in April. The footings for the basement were poured, and reinforced steel forms for the concrete walls were placed. Work began on the South Entrance Road project in July, as Renie poured concrete for the main floor of the office wing. The structural steel and partition work for the office wing was reported as sixty percent complete the next month. When James Mullen made a visit to the building site in early September, he saw masons working on split lava brick and molded rock in several sections of the building and examined the completed concrete floors in the visitor center's comfort station and auditorium.[39]

Although progress was still considered excellent in October, the visitor center project was slowed by a steel strike that caused delays in the


AS CONSTRUCTED DRAWING
PLOT & ROOF PLAN
FLAGPOLE BASE DETAILS
SECTION & PLAN
SECTION
NOTES
LEGEND
ELEVATION
DETAIL TYPICAL EXTERIOR
DRINKING FOUNTAIN DETAIL
RECOMMENDED
APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE
3

Figures 80 (page 241) and 81 (page 242). As constructed drawings for the Visitor Center at Zion National Park by Cecil Doty, December 1958. Courtesy National Park Service Technical Information Center, Denver Service Center.


AS CONSTRUCTED DRAWIN
SOUTHWEST ELEVATION
NORTHWEST ELEVATION
NORTHEAST ELEVATION
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DEPARTMENT OF THE INTERIOR
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ZION NATIONAL PARK
STONE WALL
STONE PLANTER
EXHAUST LOUVER
BASIC DATA
RECOMMENDED
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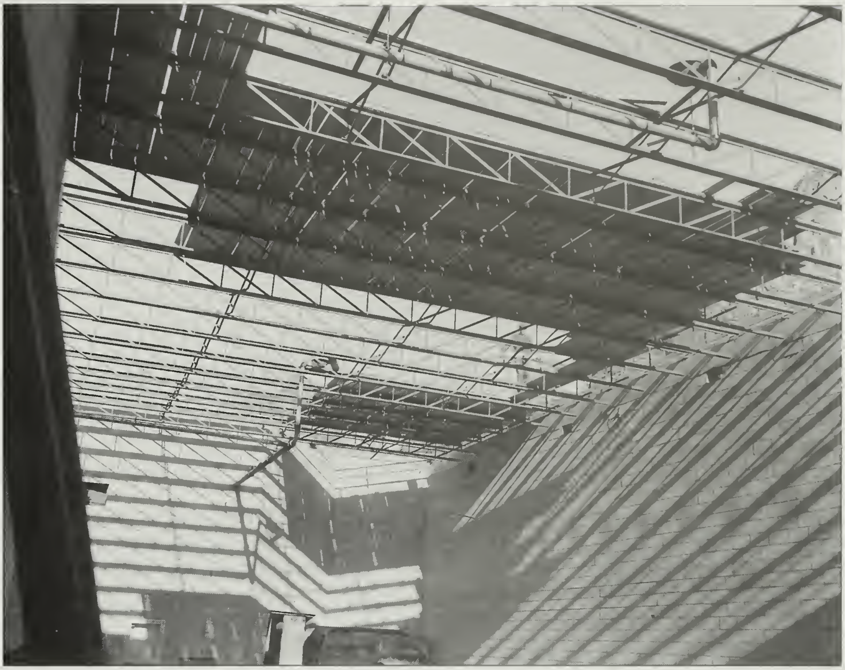


Figure 82. Zion National Park Visitor Center, exhibit room roof under construction. Photo by Carl E. Jepson, January 1960. Courtesy Zion National Park Archives.

erection of the steel framework in the lobby. The strike also delayed construction on the steel work for a bridge on the south entrance road. In the meantime, utilities were completed and plasterboard finished in the office wing. By the end of December, the wing had window sashes, oak trim, and a roof, but Park Service supervisors were forced to contemplate substituting aluminum window sashes for steel in the lobby. The completion of the lobby was contingent on the delivery of the aluminum. Although structural steel work inside the lobby and exterior block work was nearly finished, the visitor center remained a roofless shell. Acoustic stone was placed in January 1960, giving the interior of the auditorium an interesting pattern of concrete block contrasting with blocks impressed with an abstract bird motif. By the end of March the job was reported as eighty-five percent complete, and the Park Service estimated a final completion date of May 10, provided that the necessary aluminum sashes arrived. Details of construction included the placing of acoustic tile in the exhibit room and office wing, plaster on the ceiling of the auditorium, and metal lathing on the ceiling in the lobby. On April 6, Cannon visited the building and, according to Acting Project Supervisor W. P. Fairchild, "liked what he saw." Cannon asked that the bright yellow

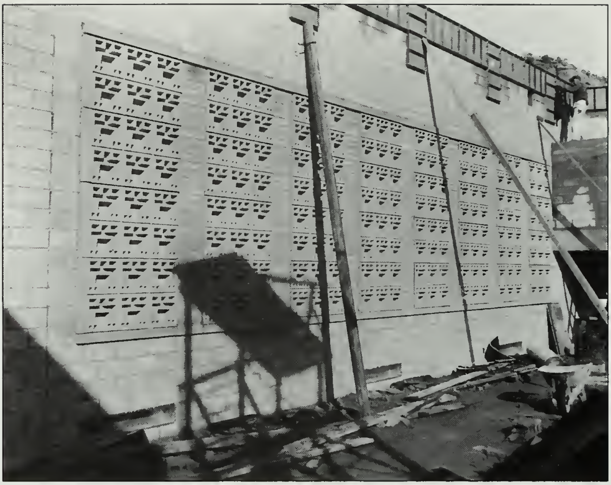


Figure 83. Zion National Park Visitor Center, acoustic stone in auditorium. Photo by Carl E. Jepson, January 1960. Courtesy Zion National Park Archives.

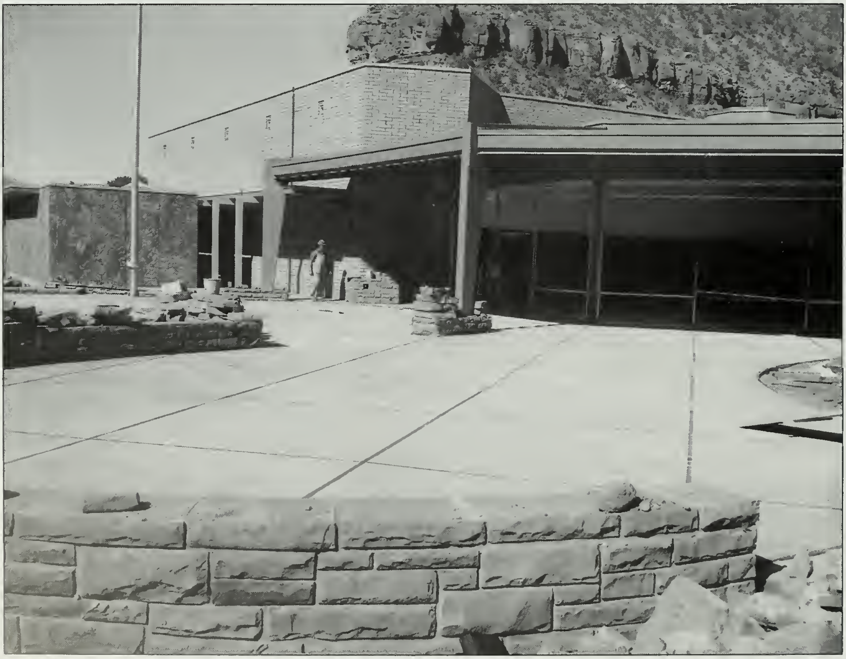
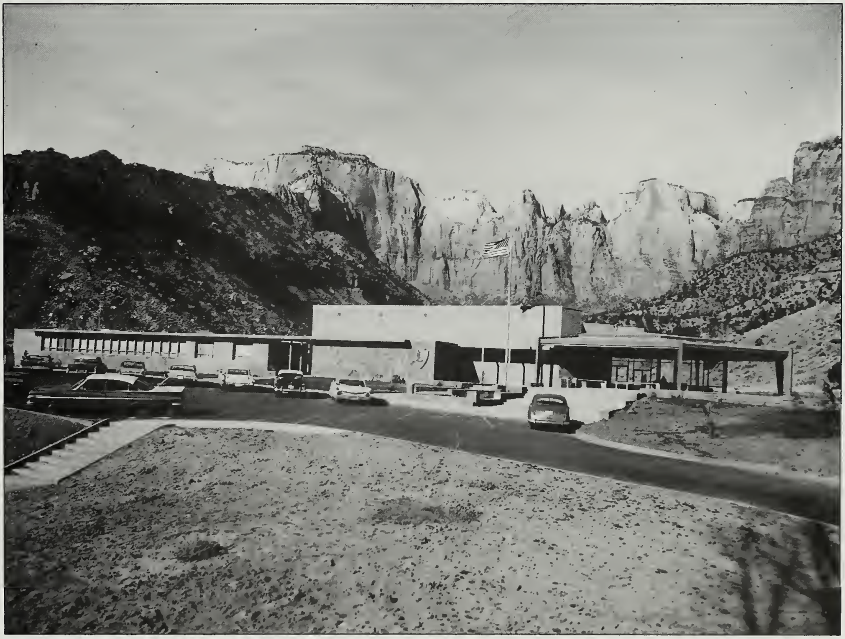


Figure 84. Zion National Park Visitor Center, northeast terrace under construction. Photo by Charles McCurdy, May 1960. Courtesy Zion National Park Archives.

"ceiling molds [sic]" be changed to match the brown walls, an alteration that Fairchild agreed improved an otherwise "gaudy" situation.[40] The aluminum was finally installed. Two days after the final inspection of the visitor center on June 8, the building was opened to visitors.[41]

In August, Superintendent Frank Oberhansley, who had replaced Franke in December 1959, reported ongoing difficulties with the visitor center: "lack of exhibits completion, troubles with audio-visual equipment, failure of air-conditioning units, being a few." The museum exhibits were not installed by the Western Museum Laboratory team until the second week of January. Landscaping, irrigation, service roads, and parking areas were almost complete by the end of March. The landscaping was performed "in accordance with Landscape Architect's drawings."[42] Once interior furnishing, exhibits, and equipment were calculated into the price tag, the building cost half a million dollars. The Superintendent may have been unhappy about interior furnishings and mechanical systems, not to mention the overall expense, but he did not complain about the building. In fact, the Park Service was so pleased with the services of Cannon and Mullen that work at three additional Utah visitor centers followed: Timpanogos Cave (1963), Natural Bridges (1965), and Golden Spike (1967).

Figure 85. Zion National Park Visitor Center, east elevation. Photo by Carl E. Jepson, February 1961. Courtesy Zion National Park Archives.



The Zion National Park Visitor Center was not officially dedicated until June 17, 1961, a full year after it had been opened to visitors. The dedication program, sponsored by a civic group called the Five County Organization, featured a speech by former superintendent and current Park Service Associate Director Eivind T. Scoyen. A press release described the new visitor center as "a 25-room, one-story and basement building of reinforced concrete, structural steel and masonry block, designed to carry out the motif of its general surroundings in the Oak Creek area of the Park."[43] All seven of the park's living superintendents attended the ceremony.

The Zion Visitor Center was certainly modern enough to offend critics of Mission 66 and the Park Service's new architectural style. As if in response to those who doubted the suitability of modern architecture in the parks, the *National Park Courier* reported that the building's "sound architectural planning . . .has kept in mind the purpose of the building and the needs of the visitor . . ."[44] The article went so far as to say that the visitor center looked "as though it belongs in Zion Canyon" and conformed to the topography of the location. This was high praise for a building with a glass-walled lobby enclosed by cantilevered spider-leg steel beams. Perhaps better than most visitor centers, the Zion building illustrates the fact that modern architecture was welcomed in the parks as long as it made some gestures toward the natural environment. Promotional literature suggests that the public welcomed bright new facilities with modern restrooms and auditoriums. Mission 66 visitor centers accommodated both the need for improved services and the equally powerful need for service buildings that complemented their surroundings.

Although the Zion Visitor Center remains much as it was in the 1960s, today's visitors no longer enjoy the original views of the canyon from the lobby. The once spacious lobby is now overwhelmed by a bookshop that blocks canyon views to the north and east. The shop is a distraction from the outdoors and minimizes the chance that visitors might walk out to the exterior viewing terrace. In photographs taken shortly after construction, the lobby is completely empty except for the information desk, the relief map in the center of the space, and chairs for viewing the surrounding scenery. The lobby's modern character was more apparent in the 1960s, when the unique, translucent viewing area extended from the solid mass of the rest of the building.

CECIL DOTY, ARCHITECT

After the official conclusion of the Mission 66 program in 1966, Cecil Doty received the Department of the Interior's distinguished service

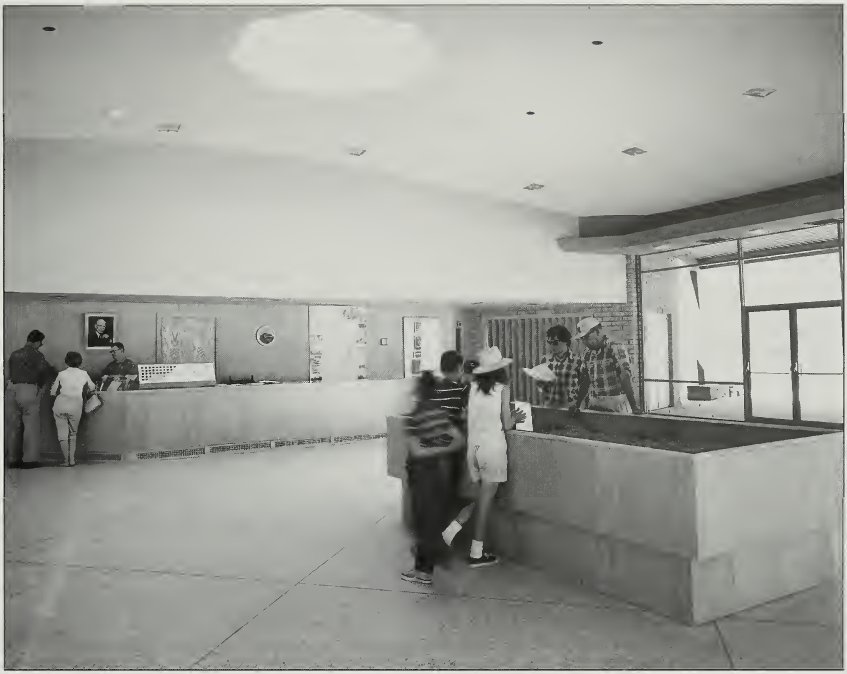


Figure 86. Zion Visitor Center lobby, June 1960. Courtesy Zion National Park Archives.

award and transferred to the Eastern Office of Design and Construction. His main project during this time involved working with Skidmore, Owings and Merrill on the fountains around the Mall. Doty retired two years later. Two oral history interviews were conducted in the mid-1980s, when Doty lived in Walnut Creek, California.[45]

In 1990, the year Doty died, he described one of his "pet peeves"—the fact that as a Park Service employee he was always considered a draftsman, not an architect.[46] Many of the buildings he designed were constructed without his presence; some without his ever seeing the finished product. But in his old age Doty could rest assured that he had made a significant, if largely unheralded, contribution to the National Park System. Doty is the individual responsible for the consistency of design that is the Park Service Modern style. The hand of Cecil Doty influenced nearly every visitor center built, including three of the five featured in this study. In the same way that Doty closely imitated Herbert Maier's work, admiring Park Service architects copied his designs. As we evaluate Mission 66 visitor centers, we should not become too preoccupied with whether or not a building is an original

Cecil Doty design. The Park Service Modern style, like Park Service Rustic, was the choice of its day and the work of its generation.

ENDNOTES

[1] See Appendix II: Drawings of Visitor Centers by Cecil Doty.

[2] Conrad Wirth to Washington Office and All Field Offices, memorandum, May 28, 1954, Box 12, Conrad Wirth Papers (CWP), American Heritage Center (AHC), Laramie, Wyoming.

[3] As his associate director, Wirth chose Eivind T. Scoyen, superintendent of Glacier National Park during the New Deal and superintendent of Sequoia and Kings Canyon since 1947. The organization hired Cecil Doty for his first park work.

[4] Eivind T. Scoyen, Acting Director, to All Field Offices, memorandum, March 22, 1956, Box 6, CWP, AHC.

[5] E.T. Scoyen to Washington Office and All Field Offices, memorandum: "Advance Planning," April 12, 1956, Box 6, CWP, AHC; Scoyen to Washington Office and All Field Offices, memorandum: "Contract Authority for Professional Services," April 12, 1956, Box 6, CWP.

[6] Conrad Wirth to Washington Office and All Field Offices, memorandum, July 18, 1956, Box 12, CWP, AHC.

[7] The work of Paul Phillipe Cret (1875-1945), a French-born American architect, includes such Philadelphia landmarks as the Delaware River Bridge (1920-1926) and the Rodin Museum (with Jacques Greber, 1926-1930), as well as buildings in France, Belgium, and Spain. Cret taught design at the University of Pennsylvania from 1903-1937 and influenced many future architects including Louis Kahn.

[8] Three years later, these volumes were published in a single book complied by Albert H. Good, *Park and Recreation Structures* (National Park Service, 1938). Doty lists the following references in *Park and Recreation Structures* as examples of his early state park work: vol. I, A15, vol. 2, D6 (entrance way and shelter, Turner Falls State Park); vol. 2, D19 (picnic shelters, Lake Guernsey, Lake Okmulgee), E8 (refectory, Mohawk Metropolitan Park, Tulsa, Oklahoma), H9 (bathhouse, Boiling Springs State Park, Oklahoma), K9 (museum, Custer State Park, South Dakota) and K10, (museum, Lake Guernsey State Park, Wyoming).

[9] Cecil Doty to Laura Soulliere, August 1976, Oklahoma State University Archives (OSU); Oral History Interview, transcript, "Laura Soulliere Harrison interviews Cecil Doty," 1985, OSU archives.

[10] Interview with Cecil J. Doty by Herbert Evison, October 26, 1962, Western Office of Design and Construction, San Francisco; Harpers Ferry Center archives.

[11] Lovelady and Swatek had worked with Doty at the office in Oklahoma City.

[12] The final approved drawings are dated February and March 1938 and March 1939. The completed building was influenced by Carlos Vierra, the construction foreman, who painted the missions of New Mexico in 1915, maintained a collection of photographs of local buildings, and provided the architects with information about regional construction techniques. According to Herbert Maier, "Vierra said: 'No architect who has come to Santa Fe has more rapidly absorbed the native style nor shown a keener appreciation for its detail.'" See Maier, *Santa Fe New Mexican* (July 1, 1939), 6.

[13] Doty to Soulliere, August 1976; Oral History Interview, 1985.

[14] "Early Spanish Architecture is Featured," *Santa Fe New Mexican* (July 1, 1939).

[15] Lyle Bennett first worked for the Park Service as a ranger in 1927. Although not trained as an architect, he had a degree in fine arts from the University of Missouri. Bennett's career, like Doty's, continued into the Mission 66 period; when the Division of Design and Construction reorganized in June 1954, Bennett became the WODC supervising architect. He was, in effect, Doty's supervisor.

[16] Doty produced preliminary designs for the lodge in May 1949. The design was altered over the next few years. Doty's role in the changes, if any, is unknown. Although Doty takes credit for the administration building at Joshua Tree, his name has only been located in conjunction with the building's furniture.

[17] Interview with Cecil Doty by Herbert Evison, October 26, 1962.

[18] "Public Service Building, Flamingo Marina," February 15, 1954; 7 sheets, drawing #NP-EVE-1006, TIC.

[19] Lewis, *Museum Curatorship*, 142.

[20] Doty's name does not appear on the preliminary drawings dated December 1954 or the February 1956 revisions, but he may have been responsible for the original schematic design of the Carlsbad Caverns Public Use Building. In his interview with Laura Harrison, Doty recalls his work on the visitor center at Carlsbad. Lyle Bennett and Doty's colleague Lovelady visited the site in 1953.

[21] Interview with Cecil Doty by Laura Harrison, 1985.

[22] Interview with Cecil Doty by Herbert Evison, October 26, 1962.

[23] Cecil J. Doty, "Space Relationship Diagrams of Lobby, Exhibit Room and Audio-Visual Facilities at Badlands National Monument and Theodore Roosevelt National Memorial Park," in "Visitor Center Planning," WODC February 4-6, 1958.

[24] Wupatki National Monument archival photo collection, classification # 069.5, negative number, W 51.

[25] A panel entitled "Why is Such a Plan Needed?" included the following photo caption under the old administration building: "One of the most urgent needs is for visitor centers which provide information, publications, exhibits, restrooms, and are manned by rangers. These centers of information are woefully inadequate at present."

[26] Russell, L. Mahan, Superintendent's Monthly Report, December 8, 1961.

[27] Superintendent's Monthly Report, June 7, 1962.

[28] The construction contract was awarded to the Frontier Construction Company of Tucson on June 9, 1964, for $103,700.

[29] Superintendent's Monthly Report, August 10, 1964.

[30] Interview with Doty by Harrison, 1985.

[31] "Mission 66 for Zion National Park," (National Park Service, U.S. Dept. of the Interior, n.d.), 8.

[32] Dena S. Markoff, "An Administrative History: Decision-Making that Shaped Zion National Park 1909 to 1981" (Western Heritage Conservation, Inc., 1982).

[33] Superintendent's Report, October 1956.

[34] Markoff, Administrative History.

[35] The firm was founded in 1908 as Cannon and Fetzer. The name was changed to Cannon and Mullen in 1937.

[36] Information on Cannon and Mullen was provided by the Utah State Historical Society, Salt Lake City, which owns the Howell Q. Cannon Collection.

[37] A set of twenty-nine sheets of working drawings for the visitor center/headquarters, dated May 5, 1958, is on microfiche in the Technical Information Center, Denver Service Center.

[38] Doty's first preliminary drawings were completed in April 1957; A sheet with alterations is dated September 10, 1957. The drawings are on microfiche in the Technical Information Center, Denver Service Center.

[39] Superintendent's Monthly Reports, February 6, 1959; March 6, 1959; August 13, 1959; September 9, 1959.

[40] "Contract No. 14-10-345-5 Visitor Building, Mr. Cannons visit to Project. W. P. Fairchild to Coordinating Project Supervisor, Area III." memorandum, April 10, 1960.

[41] Superintendent's Monthly Reports, October 14, 1959; November 5, 1959; December 8, 1959; January 11, 1960; February 5, 1960; March 7, 1960; April 8, 1960; May 12, 1960; June 13, 1960; July 14, 1960.

[42] Superintendent's Monthly Reports, August 12, 1960; September 1, 1960.

[43] "Visitor Center to be Dedicated at Zion National Park, Utah," Department of the Interior Information Service, press release, June 14, 1961.

[44] "Zion's New Visitor Center Soon Proves Itself Notable Success," *National Park Courier*, vol. 5, no. 3.

[45] The thesis by Jonathan Searle Monroe is based, in part, on an oral history interview performed in June, 1985. See Monroe, "Architecture and the National Parks: Cecil Doty and Mission 66," Master of Architecture thesis, University of Washington, 1986.

[46] Interview with Cecil Doty by Jacilee Wray, February 26, 1990, Walnut Creek, California.

CONCLUSION

MISSION 66 IN RETROSPECT

Nearly thirty years after their design, Cecil Doty singled out three visitor centers he disliked—Chaco Canyon, Grand Teton and Yellowstone—and declared he "would never do them again."[1] Doty attributed these failures to the lack of available funds. In a general way, the entire Mission 66 program could be excused on this basis, since the goal was to build as many visitor centers for as low cost as possible. The "assembly-line" mentality could hardly be avoided. Despite this built-in deficiency, Doty designed a wide variety of visitor centers throughout the western region and consistently devised creative ways of working on a tight budget. The three visitor centers he dreaded to repeat only became problematic after additional demands were made without sufficient means.

The Park Service began assessing the Mission 66 program immediately after its completion and was assisted in this respect by the American Institute of Architects, which awarded it the 1970 Citation of an Organization for "its attempts to develop regional character in the visitor centers and also for its continuing effort to provide excellent design at all levels in our national parks." The *AIA Journal* focused on visitor centers in "Our Park Service Serves Architecture Well," an article praising individual buildings and the design methodology employed throughout Mission 66. The section on the Park Service's criteria for good design explained the rationale behind its choice of the modernist aesthetic for park buildings: "Sometimes areas seem to cry for a design suggesting traditional or regional style. However, to maintain regional or particularly period architecture would result in oddly proportioned boxes covered with pseudo-period gimcracks or reasonably well-proportioned structures stuffed with nonfunctioning activities. The best attack is not to copy styles but to use regional materials and echo forms if possible."[2] Ten years later, in 1976, the Park Service celebrated the 20th anniversary of the launching of Mission 66 with a report of its achievements—first in terms of the magnitude of construction, but finally as a program boosting the conservation movement and inspiring the country to develop long-range projects for natural and cultural resource preservation. Park Service Modern architecture symbolized the agency's decision to move forward and develop a broader, more enlightened understanding of its responsibilities as stewards of the nation's parks, monuments and historic sites.[3]

If Mission 66 architecture was novel for the Park Service, the elite architectural profession had largely discounted the principle tenets of modernist design by the late 1960s. The visitor centers featured in this study are all considered modern, but they range from the work of an architect born in 1889 and trained in International Style design, to the early efforts of a firm that would define itself against the abstractions of modernist methodology. The different approaches, philosophies, and results achieved by these architects come together under the umbrella Mission 66, or Park Service Modern, architecture. This decade of patronage provided opportunities for little-known firms and for Park Service architects to experiment with modern design in unique settings and situations. Mission 66 was the last time the federal government championed a development program of this type and at such a scale, and it was also the most socially optimistic architectural effort of the day. In the context of American architectural history, Mission 66 was both old-fashioned and refreshing. The next two decades would bring architectural cynicism that dissolved faith in modernist design.

Even as the Mission 66 program concluded, many architects were beginning to reject modernism for its more colorful successor, postmodernism. And as modernism has come to symbolize the failure to achieve social transformation through design, the gleam of its early existence has faded. Modern architecture in the parks has aged particularly poorly. With limited funds from the beginning, park architects designed in a style that requires constant maintenance. Unlike rustic structures, which benefit from a patina of age and wear, modern buildings depend on a crisp, clean aesthetic. A crumbling rustic wall is considered appropriately antiquated, but a deteriorating gypsum panel only appears shabby. "Improvements" are also more likely to damage the spare, modernist style. When smooth, colored tile is covered with industrial carpet and wood paneling tacked over window walls, a spacious, sunny lobby becomes dim and utilitarian. The Park Service recognized the potential problems of maintaining "high quality in aesthetic features" of Mission 66 visitor centers as early as 1958. Lyle Bennett, supervisory architect of the WODC, criticized the parks for the development of "cluttered, inharmonious or otherwise detracting effects" caused by inappropriate interior decor and furnishings.[4]

In analyzing the Mission 66 effort, it is not only important to consider what was built, but what it was possible to build quickly and efficiently during the 1950s and 1960s. Although comparisons between the Park Service Rustic and Park Service Modern styles are tempting, it is more realistic and historically accurate to think about Mission 66 architecture in relation to changes in the architectural profession. The prohibitive expenses of materials and labor after the war did not permit a return to New Deal methods of construction. As Doty realized, "when the CCC and all that labor ended, getting stone was out of the question."[5] Mission 66 architects and planners approached the crisis from a practical point of view and successfully solved the problem. Beginning in the 1950s, the Park Service realized that simple, contemporary facilities would further its tradition of architectural excellence and represent its forward-looking principles. Cheap imitations of the rustic style would only serve as reminders of American society's loss of fine craftsmanship, traditional materials, and regional identity. The Mission 66 program was intended to memorialize its era's achievements—greater accessibility, more extensive services, and the convenience of standardization.

The construction of modern buildings in national parks was not a rash decision, nor was it made by a handful of superintendents. Modernism came into the parks with the blessing of its generation, and its inexpensive, easily constructed buildings improved and expanded the Park System at an unprecedented rate. The Mission 66 program standardized visitor services in countless ways that we now take for granted, providing the basic information, visitor facilities, and interpretive programs that remain an essential part of all national parks. Today, our experience of national parks is determined, to a great extent, by the visitor services established around Mission 66 visitor centers. The visitor center is a part of our national culture, not only within the national park system, but within the National Forest Service, in communities eager to attract tourism, and at private sites throughout the country. As a building type, the visitor center may be the National Park Service's most significant contribution to American architecture. The historical value of the original visitor centers should not be underestimated. The Park Service and the public once celebrated Mission 66 as a great achievement and may well look back on it in these terms. If the current generation cannot always appreciate the styles and choices of another era, it should have the foresight to recognize potential historic value. As a leader in the preservation of the nation's history, the Park Service is responsible for ensuring that the best is left for future generations to judge.

ENDNOTES

[1] Interview with Doty by Harrison, 1985.

[2] Robert E. Koehler, "Our Park Service Serves Architecture Well," *AIA Journal* (January 1971): 18-25.

[3] Howard Stagner, report staff chairman, "Mission 66 Revisited," National Park Service, 1976.

[4] Lyle Bennett, "Visitor Center Planning," 12.

[5] Interview with Doty by Harrison, 1985.

APPENDIX I

MISSION 66 VISITOR CENTERS

PREFACE TO APPENDICES:

The following list of Mission 66 visitor centers was compiled by examining drawings on microfiche at the Technical Information Center (TIC) in the NPS Denver Service Center, and by comparing records of visitor center construction on file in the NPS History Collection at the Harpers Ferry Center. Regional NPS staff also contributed information. Field checking and further research will be required in order to confirm or amend the information presented in this list. The dates given are typically those found on design and construction drawings and indicate the period in which the building was designed. In some cases another date is given after a slash, indicating the date of the building's dedication. Current park names are used to identify Mission 66 visitor centers rather than the names of the parks at the time of construction.

This list includes visitor centers built as part of the Mission 66 program (1956-1966). The list includes some early examples for which design began before 1956, as well as some buildings that were begun before 1966 but not completed until slightly later. Estimates vary regarding the total number of visitor centers built as part of the Mission 66 program. Annual reports of the secretary of the interior usually mention the visitor centers constructed each year, but publication of the reports ended after 1963. Conrad Wirth and other Mission 66 promoters claimed that about a hundred visitor centers were constructed during the ten-year program (Wirth gave the figure of 114 in his memoirs). A 1965 "museums statement" issued by the NPS notes that new exhibits were prepared for 101 new visitor centers and 40 rehabilitated visitor centers.

But "new construction" of visitor centers sometimes included substantial additions to or renovation of older structures. The visitor center at Vanderbilt Mansion in Hyde Park, New York, for example, was listed in the 1963 annual report as a new visitor center, although it was a rehabilitated historic structure. Some of these buildings were park museums built before World War II. Small buildings known as "secondary visitor centers" were constructed in some parks that were already equipped with at least one main visitor facility. The secondary visitor center at Little Mountain Park on the Natchez Trace Parkway, for example, was no more than a rectangular exhibit space with attached restrooms. Whether or not such secondary visitor centers were included in different counts is unclear.

Visitor center services were provided by buildings called by other names, or known by more than one name. Just prior to the Mission 66 program, museum buildings that incorporated visitor center features (and were later referred to as visitor centers) often were still called museums or museum/administration buildings. Even once the visitor center model (and name) had caught on, its components were frequently incorporated into a central administration building. The "administration building" at Devil's Tower, for example, is essentially a visitor center. The Beaver Meadows Visitor Center at Rocky Mountain is also known as the Headquarters Building. Other names that have been used for visitor centers include "public use building," "public service building," "utility building," "visitor contact station," "visitor center and equipment storage building," and "operations building." Administration or utility buildings with little or no visitor contact services, however, are not included in this list.

All of these factors make it difficult to specify the exact number of Mission 66 visitor centers. The following list sorts out the available documentation to come up with 110 visitor centers (including those that have been demolished or destroyed) and 16 visitor center "additions." Like the other information in this list, however, these numbers should be subject to correction as more in-depth research is done on individual buildings.

Appendix II is a record of drawings by Cecil Doty on microfiche at the Technical Information Center, Denver Service Center. As of 1999, the Center's computer data base does not search by building type or architect. It should be assumed that more Doty drawings remain to be discovered.

Abraham Lincoln Birthplace National Historical Site; Hodgenville, Kentucky; 1958-1959; Eastern Office of Design & Construction (EODC).

Antietam National Battlefield; Sharpsburg, Maryland; 1961-1962; EODC/William Cramp Scheetz, Jr., Philadelphia.

Arches National Park; Moab, Utah; 1959/1960; Western Office of Design & Construction (WODC)/Doty.

Assateague Island National Seashore; Berlin, Maryland; 1966; NPS Philadelphia Planning & Service Center.

Badlands National Park; Cedar Pass Visitor Center; Interior, South Dakota; 1957-1958/1959; WODC/Doty/Lucas, Craig, Whitwam, Rapid City.

Big Bend National Park; Panther Junction Visitor Center; Texas; 1964-1968; WODC/Doty.

Big Hole National Battlefield; Wisdom, Montana; 1964-1971; NPS San Francisco Design and Construction.

Blue Ridge Parkway; Peaks of Otter Visitor Center; Virginia; 1956-1958; Robert L. Brown, architect, Roanoke.

Booker T. Washington National Monument; Hardy, Virginia; 1964-1965/1966; EODC/Smithey & Boynton, Roanoke.

Bryce Canyon National Park; Utah; 1958/1959; WODC/Cannon and Mullen, Salt Lake City.

Cabrillo National Monument; San Diego, California; 1963-1966/1966; Frank L. Hope & Associates, San Diego/WODC/Doty.

Canyon de Chelly National Monument; Chinle, Arizona; 1963-1964; WODC/Doty.

Cape Cod National Seashore; Salt Pond Visitor Center; Wellfleet, Massachusetts; 1964-1965; EODC/Biderman.

Capitol Reef National Park; Torrey, Utah; 1963-1965/1967; WODC/Doty/Arthur K. Olsen & Associates, Salt Lake City.

Capulin Volcano National Monument (formerly Capulin Mountain); New Mexico; 1962-1963; NPS Southwest Regional Office/Doty.

Chaco Culture National Historical Park; Bloomfield, New Mexico; 1957;1959; WODC/Truman J. Mathews, Santa Fe.

Chickasaw National Recreation Area (formerly Platt); Travertine Nature Center; Oklahoma; 1966-67; NPS San Francisco Planning & Service Center/MacKie & Kamrath, Houston.

Colonial National Historical Park; Yorktown Visitor Center, Virginia; 1956/1957; EODC/Gilboy, Bellante and Clauss, Philadelphia.

Colorado National Monument; Fruita, Colorado; 1960-1963; WODC/Doty.

Coronado National Memorial; Hereford, Arizona; 1959; WODC.

Craters of the Moon National Monument; Arco, Idaho; 1956-1957/1958; WODC/Hurt, Trudell, Capell, San Francisco.

Cumberland Gap National Historical Park; Middlesboro, Kentucky; 1958-1959; EODC.

Curecanti National Recreation Area; Center Point Visitor Center; Gunnison, Colorado; 1965-1968; NPS San Francisco Planning & Service Center/Doty/Anderson, Barker, Rinker.

Death Valley National Park; Furnace Creek Visitor Center; California; 1957-1958/1959; WODC/Doty/Welton Becket & Associates, San Francisco.

Denali National Park and Preserve (formerly Mount McKinley); Eielson Visitor Center; Alaska; 1956-1957/1961; WODC.

Dinosaur National Monument; Quarry Visitor Center; Jensen, Utah; 1956-1957/1958; Anshen and Allen, San Francisco.

Dinosaur National Monument; Headquarters; Artesia, Colorado; 1964-1965; Arthur K. Olsen & Associates, Salt Lake City.

Effigy Mounds National Monument; Harpers Ferry, Iowa; 1958-1959/1961; EODC.

El Morro National Monument; Ramah, New Mexico; 1964-1968; Delong & Zahm Associates, Burlingame.

Everglades National Park; Flamingo Visitor Center; Florida; 1956/1957; EODC/Harry L. Keck, Jr., Coral Gables.

Everglades National Park; Royal Palms Visitor Center; Florida; 1958; EODC.

Everglades National Park; Parachute Key Visitor Center; Florida; 1959-1962; EODC; demolished after damage in Hurricane Andrew in 1992.

Fort Caroline National Memorial; Jacksonville, Florida; 1955-1956/1957; EODC.

Fort Clatsop National Memorial; Astoria, Oregon; 1962-1963; WODC/Jacobberger, Franks & Norman, Portland.

Fort Donelson National Battlefield; Dover, Tennessee; 1960-1962; EODC.

Fort Frederica National Memorial; St. Simons Island, Georgia; 1955-1956/1957; EODC.

Fort McHenry National Monument and Historic Shrine; Baltimore, Maryland; 1962-1963; EODC/Biond, Benson, Koury.

Fort Necessity National Battlefield; Farmington, Pennsylvania; 1965/1966.

Fort Pulaski National Monument; Savannah, Georgia; 1962-1963; Levy & Kiley, Savannah/McGinty & Stanley Associates.

Fort Raleigh National Historic Site; Manteo, North Carolina; 1964-1965; EODC.

Fort Union National Monument; Watrous, New Mexico; 1956-1958/1959; WODC/ Doty/Bennett.

Fort Vancouver National Historical Site; Vancouver, Washington; 1960-1962; WODC.

Fredricksburg and Spotsylvania County Battlefields National Military Park; Chancellorsville Visitor Center; Virginia; 1961-1963; EODC.

George Washington Carver National Monument; Diamond, Missouri; 1958-1959/1960; EODC.

George Washington Memorial Parkway; Great Falls Visitor Center; Virginia; 1966; Kent Cooper and Associates, Washington, D.C.

Gettysburg National Military Park; Pennsylvania; 1958-1961/1962; Neutra and Alexander, Los Angeles.

Gila Cliff Dwellings National Monument; Silver City, New Mexico; 1965/1967; WODC/Delong & Zahm Associates, Burlingame.

Glacier National Park; Logan Pass Visitor Center; Montana; 1963; WODC/Brinkman & Lenon, Kalispell.

Glacier National Park; St. Mary Visitor Center; Montana; 1964/1966; WODC/Brinkman & Lenon, Kalispell.

Glen Canyon National Recreation Area; Page, Arizona; 1963-1966; WODC/Doty/Bureau of Reclamation Colorado River Storage Project.

Golden Spike National Historic Site; Brigham City, Utah; 1966-1968; NPS San Francisco Design & Construction/Cannon and Mullen, Salt Lake City.

Grand Canyon National Park; South Rim Public Use Building; Arizona; 1954-1955/1957; WODC/Doty.

Grand Teton National Park; Colter Bay Visitor Center; Moose, Wyoming; 1956-1957/1959; WODC/Malone & Hooper, San Francisco.

Grand Teton National Park; Moose Visitor Center, Wyoming; 1957-1958/1959; WODC/Spencer, Ambrose & Lee, San Francisco.

Great Basin National Park (formerly Lehman Caves); Baker, Nevada; 1960-1962; WODC.

Great Sand Dunes National Monument; Mosca, Colorado; 1961; WODC.

Great Smoky Mountains National Park; Sugarlands Visitor Center; Tennessee; 1957-1958/1961; EODC.

Hawaii Volcanoes National Park; Kalapana Visitor Center; 1965-1966; WODC; destroyed by volcanic activity 1989.

Homestead National Monument of America; Beatrice, Nebraska; 1961-1962; WODC/Leo A. Daly & Associates.

Hopewell Culture National Historical Park (formerly Mount City Group); Chilicothe, Ohio; 1959/1960; William Cramp Scheetz, Jr., Philadelphia.

Hopewell Furnace National Historic Site (formerly Hopewell Village); Elverson, Pennsylvania; 1957-1958/1959; EODC.

Horseshoe Bend National Military Park; Daviston, Alabama; 1962-1963; EODC/Biggers & Neal, Opelika, Alabama.

Jamestown National Historic Site; Virginia; 1956/1957; EODC/Gilboy, Bellante and Clauss, Philadelphia.

Jefferson National Expansion Memorial; St. Louis, Missouri; 1960-1965; Eero Saarinen & Associates, Birmingham, Michigan.

Jewell Cave National Monument; Custer, South Dakota; 1966-1969; NPS San Francisco Planning & Service Center/Doty.

Kennesaw Mountain National Battlefield Park; Georgia; 1963-1964; Francis P. Smith & Henry H. Smith, Atlanta.

Lake Mead National Recreation Area; Temple Bar Visitor Center; Nevada; 1961-1962; WODC.

Lake Mead National Recreation Area; Boulder Beach Visitor Center; Nevada; 1966-67; Delong & Zahm Associates, Burlingame.

Mammoth Cave National Park; Kentucky; 1958-1959; Bellante & Clauss, Philadelphia.

Mesa Verde National Park; Navajo Hill Visitor Center, Colorado; 1964-1968; WODC/Joseph & Louise Marlowe, Denver.

Montezuma Castle National Monument; Camp Verde, Arizona; 1957-1959/1960; WODC.

Moores Creek National Battlefield; Currie, North Carolina; 1957-1958/1959; EODC.

Mount Rainier National Park; Ohanapecosh Visitor Center; Washington; 1964; WODC/John M. Morse & Associates, Seattle.

Mount Rainier National Park; Henry M. Jackson Memorial Visitor Center; Washington; 1964-1966/1967; Whimberley, Whisenand, Allison & Tong, Honolulu/McGuire & Muri, Tacoma.

Mount Rushmore National Memorial; Keystone, South Dakota; 1957-1963; WODC/Doty/Harold Spitznagel & Associates, Sioux Falls; demolished in 1994.

Natchez Trace Parkway; Headquarters and Visitor Center; Tupelo, Mississippi; 1960-1963; EODC.

Natural Bridges National Monument; Lake Powell, Utah; 1964-1965/1968; WODC/Doty/Cannon and Mullen, Salt Lake City.

Navajo National Monument; Betatakin Visitor Center; Tonalea, Arizona; 1963-1964; WODC.

Olympic National Park; Hoh River Visitor Center; Washington; 1961-1962; WODC/Doty.

Olympic National Park; Hurricane Ridge Visitor Center; Washington; 1964; WODC.

Organ Pipe Cactus National Monument; Ajo, Arizona; 1956-1957/1958; WODC/Lescher and Mahoney, Phoenix.

Pea Ridge National Military Park; Arkansas; 1962-1963; EODC.

Petersburg National Battlefield; Virginia; 1965-1966/1967; EODC/NPS Philadelphia Planning & Service Center.

Petrified Forest National Park; Painted Desert Community; Arizona; 1959-1962/1963; Neutra and Alexander, Los Angeles.

Pipestone National Monument; Minnesota; 1957/1958; EODC.

Pu'uhonua o Honaunau National Historical Park (formerly City of Refuge); Hawaii; 1966-1967; NPS San Francisco Planning & Service Center.

Rocky Mountain National Park, Alpine Visitor Center; Colorado; 1962-1964/1965; WODC/William C. Muchow & Associates.

Rocky Mountain National Park; Beaver Meadows Headquarters; Estes Park, Colorado; 1964-1967/1967; Taliesin Associated Architects.

Rocky Mountain National Park; Kawuneeche Visitor Center; Grand Lake, Colorado; 1967-1968; WODC.

Russell Cave National Monument; Bridgeport, Alabama; 1962-1963; EODC/Northington Smith & Kranert.

Saratoga National Historical Park; Fraser Hill Visitor Center; Stillwater, New York; 1960/1962; EODC/Benson.

Sequoia & Kings Canyon National Parks; Lodgepole Visitor Center; California; 1963-1964/1966; Anshen and Allen, San Francisco.

Sequoia & Kings Canyon National Parks, Grant Grove Visitor Center; California; 1963-1965; WODC/Walter Wagner & Partners.

Shenandoah National Park; Harry F. Byrd Sr. Visitor Center, Big Meadows; Virginia; 1963-1966/1967; EODC.

Sitka National Historical Park; Alaska; 1963-1964/1968; WODC/Doty/John Morse & Associates, Seattle.

Stones River National Battlefield; Murfreesboro, Tennessee; 1961-1963; EODC/Benson.

Sunset Crater Volcano National Monument; Flagstaff, Arizona; 1965/1967; WODC/Doty.

Theodore Roosevelt National Park; Medora, North Dakota; 1958/1959; WODC/Germano Milono, San Francisco.

Timpanogos Cave National Monument; American Fork, Utah; 1961-1963/1965; WODC/Doty/Cannon and Mullen, Salt Lake City; destroyed by fire in 1991.

Tonto National Monument; Roosevelt, Arizona; 1962-1963/1965; WODC/Doty.

Vicksburg National Military Park; Mississippi; 1966-1968; NPS Philadelphia Planning & Service Center.

Virgin Islands National Park; Red Hook Dock & Visitor Reception; St. Thomas; 1961-1962; EODC.

Virgin Islands National Park; Cruz Bay Dock & Visitor Reception; St. John; 1961-1962; EODC.

Whitman Mission National Historic Site; Walla Walla, Washington; 1960-63; WODC.

Wright Brothers National Memorial; Kill Devil Hills, North Carolina; 1957-1959/1960; Mitchell/Giurgola.

Wupatki National Monument; Flagstaff, Arizona; 1962-1964/1965; WODC/Doty/Lescher and Mahoney, Phoenix.

Yellowstone National Park; New Canyon Village Visitor Center; Wyoming; 1956-1957/1958; Hurt & Trudell, San Francisco.

Yellowstone National Park; Grant Village Visitor Center; Wyoming; 1965; WODC/Adrian Malone & Associates, Sheridan.

Yosemite National Park; California; 1965-1966/1967; WODC/Spencer, Lee & Busse, San Francisco.

Zion National Park; Oak Creek Visitor Center; Springdale, Utah; 1957-1960/1961; WODC/Doty/Cannon and Mullen, Salt Lake City.

VISITOR CENTER ADDITIONS

"Additions" could be very significant construction projects, doubling or tripling the size of a building. Usually they included expansion and remodeling of an older building and the installation of new interpretive and other facilities.

Andrew Johnson National Historical Site, Greeneville, Tennessee; 1956-1957; EODC.

Aztec Ruins National Monument; New Mexico; 1958/1959; WODC.

Carlsbad Caverns National Park; New Mexico; 1953-1958/1959; NPS.

Casa Grande Ruins National Monument; Coolidge, Arizona; 1962-1963; Lescher and Mahoney, Phoenix.

Catoctin Mountain Park; Thurmont, Maryland; 1964; NPS National Capital Parks Design & Construction.

Chiricahua National Monument; Willcox, Arizona; 1962-1963/1965; WODC/Doty.

Fort Davis National Historic Site; Texas; 1964; WODC.

Hawaii Volcanoes National Park; Kilauea Visitor Center; 1965-1966 addition; NPS San Francisco Planning & Service Center.

Joshua Tree National Park; Twentynine Palms, California; 1962-1963/1964; WODC.

Little Bighorn Battlefield National Monument (formerly Custer Battlefield); Crow Agency, Montana; 1964-65; Max R. Garcia, San Francisco.

Manassas National Battlefield Park; Virginia; 1962, EODC.

Rock Creek Park; Nature Center; Washington, D.C.; 1958; NPS National Capital Parks Design & Construction.

Saguaro National Park; Tucson, Arizona; 1958-1959; WODC/Bennett.

Tumacacori National Historical Park; Arizona; 1960.

Walnut Canyon National Monument; Flagstaff, Arizona; 1963-1964; WODC/Doty.

Yosemite National Park; Happy Isles Visitor Center, California; 1963; WODC/Doty.

APPENDIX II

PRELIMINARY VISITOR CENTER DESIGN DRAWINGS BY CECIL DOTY

(IN THE NPS TECHNICAL INFORMATION CENTER, DENVER SERVICE CENTER)

Arches National Park; Moab, Utah; 6/1/59, 7/21/59; site plan, floor plan.

Badlands National Park; Cedar Pass Visitor Center; Interior, South Dakota; 2/14/57, 6/25/57, 7/25; site plan, section, elevation.

Big Bend National Park; Panther Junction Visitor Center; Texas; 10/15/64; plan, section, elevation, site plan.

Bighorn Canyon National Recreation Area; Yellowtail Dam Site; Fort Smith, Montana; 5/6/64; Bureau of Reclamation; floor plan with site details.

Bryce Canyon National Park; Utah; 9/10/57, 12/13/57, 5/58; plans, elevations.

Cabrillo National Monument; San Diego, California; 10/7/63, 1/64; plan, section, elevation, site plan.

Canyon de Chelly National Monument; Chinle, Arizona; 6/64; complete set.

Capitol Reef National Park; Torrey, Utah; 3/20/63; plan, section, elevation, sketch of theater.

Capulin Volcano National Monument (formerly Capulin Mountain); New Mexico; 4/20/62; plan, elevation, section, location.

Casa Grande Ruins National Monument; Coolidge, Arizona; 9/27/62, 2/1/63; addition; plan, section, elevation, location.

Cedar Breaks National Monument; Cedar City, Utah; 8/24/65; unbuilt; plan, section, elevation, location.

Chaco Culture National Historical Park; Bloomfield, New Mexico; 7/56, 10/30/56; plan, section, elevation.

Chickasaw National Recreation Area (formerly Platt); Flower Park Visitor Center; Sulpher, Oklahoma; 1/19/65; unbuilt; plan, section, elevation, location.

Chiricahua National Monument; Willcox, Arizona; 11/8/62; addition; plan, section, elevation, location.

Colorado National Monument; Fruita, Colorado; 5/5/60; plans, section, elevation.

Crater Lake National Park; Oregon; 3/24/58; unbuilt; plan, section, elevation.

Craters of the Moon National Monument; Arco, Idaho; 3/1/56; overall layout with roads and landscape.

Curecanti National Recreation Area; Center Point Visitor Center; Gunnison, Colorado; 4/12/65; plan, section, elevation.

Death Valley National Park; Furnace Creek Visitor Center; California; 4/12/57, 10/25/57; plan, section, elevation.

El Morro National Monument; Ramah, New Mexico; 7/16/63; plans, section, elevation.

Fort Laramie National Historic Site; Wyoming; 2/14/64; unbuilt; plan, elevation.

Fort Union National Monument; Watrous, New Mexico; 7/6/56, 4/15/58; floor plans, elevation.

Glen Canyon National Recreation Area; Dam Site Visitor Center; Page, Arizona; 12/16/63, 1/28/64; plans, elevation, plot plan.

Grand Canyon National Park; South Rim Public Use Building; Arizona; 10/54, 1/55, 2/55; full set; plans, elevations, sections, courtyard plan.

Grand Canyon National Park; Yavapai Point Visitor Center; Arizona; 10/12/65; unbuilt; 12/16/65; plan, section, sketch; two schemes.

Grand Teton National Park; Moose Visitor Center, Wyoming; 8/64; plan, section, elevation.

Great Basin National Park (formerly Lehman Caves); Baker, Nevada; 12/16/60;5/19/61; plans, section, elevation, revised floor plan.

Homestead National Monument of America; Beatrice, Nebraska; 1/26/61; plan, elevation.

Jewell Cave National Monument; Custer, South Dakota; 5/26/66; plan, section, elevation, sketch.

Lassen Volcanic National Park; Southwest Developed Area Visitor Center; Mineral, California; 1/28/62; unbuilt; plan, section, elevation, location.

Lava Beds National Monument; Indian Wells Visitor Center; Tulelake, California; 5/7/62; unbuilt; plan, elevation, section.

Mesa Verde National Park; Weatheril Mesa Visitor Center; Colorado; 8/6/64; plan, section, location, sketch, cylindrical exhibit space.

Montezuma Castle National Monument; Wells Section Visitor Center; Camp Verde, Arizona; 3/19/58, 8/15/58, 5/59; plan, section, elevation, sketch.

Mount Rainier National Park; Sunrise Visitor Center; Washington; 3/63; unbuilt; plans, location, birds-eye view.

Mount Rainier National Park; Paradise Garage and Visitor Center; Washington; 4/6/56; unbuilt; plans and sketch, visitor use on 4th floor.

Mount Rushmore National Memorial; Keystone, South Dakota; demolished; 8/9/60; plan, location, elevation, section, sketch.

Natural Bridges National Monument; Lake Powell, Utah; 3/12/64; plan, section, elevation, cylindrical lobby/museum.

Navajo National Monument; Betatakin Visitor Center; Tonalea, Arizona; 8/8/

62; plan, section, elevation.

Olympic National Park; Hoh River Visitor Center; Washington; complete set; Totem carvings on facade.

Olympic National Park; Hurricane Ridge Visitor Center; Washington; 4/64; plan, section, elevation; funnel-shaped lobby.

Organ Pipe Cactus National Monument; Ajo, Arizona; 4/30/56; plans, section, elevation.

Rocky Mountain National Park; Grand Lake Visitor Center; Estes Park, Colorado; 4/9/58; unbuilt; plans, elevation, site plan.

Sitka National Historical Park; Alaska; 8/27/63, 1/30/64; plan, site plan, section, elevation.

Sunset Crater Volcano National Monument; Flagstaff, Arizona; 3/22/65; plan, section, elevation.

Theodore Roosevelt National Park; Medora, North Dakota; 2/28/58; site plan with construction details.

Timpanogos Cave National Monument; American Fork, Utah; destroyed by fire; 4/18/61; plan, section, elevation, site plan.

Tonto National Monument; Roosevelt, Arizona; 7/3/62, 9/63; 13 sheets; plan, section, elevation; complete set.

Walnut Canyon National Monument; Flagstaff, Arizona; 1963; addition to 1938 building.

Wupatki National Monument; Flagstaff, Arizona; 3/12/62, 4/64; plan, section, elevation, site plan.

Yellowstone National Park; Mammoth Visitor Center; Wyoming; 4/21/60; unbuilt; plans, elevation, sketch; walkway to dormitory.

Yellowstone National Park; Madison Junction Visitor Center; Wyoming; 1/2/61; unbuilt; plans, section, elevation; sawn shake shingles.

Yosemite National Park; California; 9/2/63; plan, section, elevation, sketch.

Yosemite National Park; Happy Isles Visitor Center, California; addition; 1/18/63; plan, section, elevation, complete set.

Zion National Park; Oak Creek Visitor Center; Springdale, Utah; 11/13/57, 12/29/58; plans, site plan, section, elevation.

APPENDIX III

REGISTERING MISSION 66 VISITOR CENTERS IN THE NATIONAL REGISTER OF HISTORIC PLACES

ASSOCIATED HISTORIC CONTEXT

Sarah Allaback, Ph.D., *Mission 66 Visitor Centers: The History of a Building Type* (Washington, DC: Government Printing Office, 2000).

PERIOD OF SIGNIFICANCE

The "Mission 66" program was initiated by the National Park Service in 1956 and was to be completed by the 50th anniversary of the agency in 1966. Earlier planning and development projects, however, set important precedents for the program and determined much of the character of its planning and architectural development. The "public use buildings" at Carlsbad Caverns (beginning in 1953) and at Grand Canyon (beginning in 1954), for example, were important steps in developing the visitor center building type. The Mission 66 era, in the broadest sense, began in 1945, when the postwar phase of park planning and design began at the Park Service.

Conrad L. Wirth, who initiated the program as Park Service director, stepped down in 1964. His successor, George B. Hartzog, Jr., continued Mission 66 and initiated a successor program, "Parkscape," intended to be finished in time for the Yellowstone centennial in 1972. The Mission 66 era therefore did not end in 1966, since this year did not mark a significant termination or change in park planning and design policy. The Parkscape program continued many of the basic assumptions, policies, and architectural style of Mission 66. Change did arrive, but a few years later, as the Park Service planning and design functions were centralized in Denver (1971), environmental laws were enacted and implemented (especially the National Environmental Policy Act in 1969), the Parkscape program ended (1972), and the political context of Park Service leadership changed with the appointment of a politician with no park management experience, Ronald H. Walker, as Park Service director (January 1973). The general period of significance for this historical context therefore includes the years from 1945 to 1972.

The National Register of Historic Places (NRHP) requires that properties less than 50 years old possess "exceptional importance" if they are to be determined eligible for the register (Criteria Consideration G). The historical context developed for Mission 66 visitor centers indicates that only those visitor centers that served as early prototypes (1945-1956) or which were part of the original, finite group of Mission 66 visitor centers (1956-1966) potentially possess exceptional importance. The period of significance for any Mission 66 visitor center of exceptional importance should therefore fall within the years 1945-1966. Not all visitor centers dating to this period, however, will possess exceptional importance (see requirements for exceptional importance below).

ASSOCIATED PROPERTY TYPE: THE VISITOR CENTER

During the Mission 66 era, the Park Service built housing, maintenance areas, roads, entrance stations, parking lots, campgrounds, comfort stations, picnic shelters, concessioner buildings, and other park facilities intended to serve park visitors and facilitate park management. This contextual study is associated with one property type of the Mission 66 era: the park visitor center. Other Mission 66 property types besides the visitor center may be identified in the future, but will be associated with an expanded historical context and registration requirements.

Mission 66 planners coined the term "visitor center" to describe a new building type they developed to serve the vastly increased numbers of people (and their cars) who began visiting the national parks following World War II. The visitor center combined old and new building programs, and it was the centerpiece of a new era in planning for visitor services in American national parks. The influence of the visitor center idea was profound. New visitor centers (and the planning ideas behind them) were used in the development or redevelopment of scores of state parks in the United States, as well as nascent national park systems in Europe, Africa, and elsewhere. The original, finite group of Mission 66 visitor centers therefore became prototypes for a new approach to park planning all over the world.

The visitor center typically is a centralized facility that includes multiple visitor and administrative functions within a single architectural floor plan or compound. The use of the word "center" indicated the planners desire to centralize park interpretive and museum displays, new types of interpretive presentations, park administrative offices, restrooms, and various other visitor facilities. Like the contemporary "shopping center," the visitor center made it possible for people to park their cars at a central point, and from there have access to a range of services or attractions. The visitor center facilitated and concentrated public activities, and so helped prevent more random, destructive patterns of use.

The more significant examples of visitor center design contributed to the evolution of the museum, as a building type, as had earlier national park museums of the 1920s and 1930s. Some visitor center activities and programs, such as administrative offices and museum displays, had been featured in "park village" developments since the early 1920s, although usually in separate buildings. Other program elements, such as interpretive displays, slide shows, and films, were being developed at the time by Park Service interpretive planners and museum staff. The term "interpretation" replaced "education" at the Park Service in the late 1940s, and the new approach was extremely influential on the development of the floor plans, spatial processions, and functional spaces of Mission 66 visitor centers. Theater spaces for new slide shows and 16 mm films soon became standard requirements, as did space for interpretive displays which either replaced or complemented the more familiar exhibit cases of older park museums. The "information" desk (as opposed to interpretive or museum displays) became an essential and central feature of the new facility, and emphasized rapid and efficient dissemination of practical information related to park attractions, visitor safety, and convenience.

The procession (or sequence of spaces) through a visitor center was a particularly important aspect of its design. Increased numbers of visitors required this attention to circulation and visitor "flow," and contemporary modern architectural design also stressed procession as an aspect of planning new buildings. In Mission 66 visitor centers, the spatial procession through the facility often included wide entrances and exits, ramps and inclined planes, an open lobby, easy access to exhibit and auditorium areas, and significant views of natural features or historic sites (either from a terrace or through a window wall) to facilitate interpretive talks.

The siting of visitor centers was determined by new considerations in park master planning that involved the circulation of unprecedented numbers of peoples and cars. The visitor center was an integral part of a new approach to park planning. The new buildings were typically sited in relation to the overall circulation plan of the park, in order to efficiently intercept visitor flow at critical points. The criteria for siting Mission 66 visitor centers therefore differed from the criteria for siting and designing the park villages and museums of the prewar era. In larger parks, new visitor centers were often sited at park entrances, or on park roads "en route" to major destinations in the park. In other cases, visitor centers were sited at a major destination or attraction within the park. In some cultural parks, visitor centers were often sited as close as possible to the landscape or other resource to be interpreted. This implied a certain amount of encroachment on the park landscape, but it was felt that this provided the most powerful means of interpreting a site that otherwise might remain obscure or less than fully appreciated by park visitors.

Although visitor centers typically were sited in relationship to the park's automotive circulation plan, designers explored the potential for visitors to use nearby trails and outdoor spaces once they were out of their cars. Outdoor amphitheaters, roof terraces, and other exterior features all served as functional parts of the visitor center complex. Rest rooms often were designed as separate buildings adjacent to the visitor center, or at least with separate outdoor entrances. Nearby parking lots and site development were integral to the overall procession into and through the building. Ramps often replaced stairs into and out of the building, and window walls helped break down the division between site and interior space. Short interpretive trails ("nature trails") were often developed to provide an outdoor experience near the visitor center, and outdoor picnic and sitting areas were common as well.

The Mission 66 visitor center remains today as the most architecturally significant expression of the planning and design practices developed by the Park Service during the Mission 66 era.

ASSOCIATED ARCHITECTURAL STYLE: "PARK SERVICE MODERN"

The Mission 66 era visitor center also embodied a distinctive new architectural style that can be described as "Park Service Modern."

Park Service Modern architecture responded to the new context of post-World War II social, demographic, and economic conditions. American architects had assimilated the influence of European modern architecture by the 1950s, and Park Service architects in turn were influenced by this national trend. Park Service Modern style was an integral part of a broader effort at the Park Service to transform the agency, and the national park system, to meet the exigencies of postwar America. It was during the postwar period that the Park Service adopted the "arrowhead" logo and redesigned agency uniforms. As part of Mission 66, new professional training programs were established and agency personnel was expanded. Major land acquisition led to the development of new kinds of parks, including national recreation areas (such as Glen Canyon, 1958) and national seashores (such as Cape Cod, 1961). Other parks that had been acquired earlier but remained undeveloped, such as Everglades and Big Bend national parks, became showcases of Mission 66 planning and design. In some cases, such as Carlsbad Caverns National Park or Chiricahua National Monument, visitor center "additions" encased or extended older, rustic buildings, effectively transforming them into visitor centers.

In some ways Mission 66 continued traditions of Park Service planning and design; in other ways postwar social conditions, new practices in the construction industry, and the budget policies of the Truman and Eisenhower administrations necessitated new approaches to national park planning and management. Mission 66 planners responded to the tremendously increased demand for outdoor recreation, for example, as well as the increased development of gateway communities outside parks. Above all, the emerging Interstate Highway system forever changed the situation for many national parks, making them less isolated and more visited than ever. In some cases, such as Petrified Forest National Park, the locations of Interstate routes influenced the siting of park visitor centers.

Park Service Modern architectural style responded to all of these influences, and served an essential role in the Mission 66 program by utilizing efficient methods of construction (including inexpensive building materials) while providing a new, contemporary image for the visitor centers and other buildings. Park Service Modern buildings exploited the functional advantages offered by postwar architectural theory and construction techniques. The larger, more complex programming of the visitor center encouraged architects, especially Cecil Doty (at the NPS Western Office of Design and Construction) to take advantage of free plans (in which different functional spaces overlapped or were only partially divided), flat roofs (as well as other roof types), and other established elements of modern design in order to create spaces in which larger numbers of visitors could circulate easily and locate essential services efficiently. Such planning dictated the use of concrete construction and prefabricated components, and also often featured windows of unusual size, shape, and location. Unusual fenestration, in particular, was a hallmark of contemporary architecture and was often used with great effect in Mission 66 visitor centers to provide generous views of scenic or historic areas. Some buildings, such Cape Cod (Salt Pond) and Colorado National Monument visitor centers, were clearly sited in part to provide important views from within the building or from adjacent outdoor spaces.

These aspects of contemporary modern architecture in the 1950s proved particularly suited to the new programmatic and technical requirements faced by park architects of the era. At the same time, Park Service Modern design built on some precedents of Park Service Rustic design, especially in the use of interior courtyards, plain facades, and exterior masonry veneers. The result was a distinctive new style of park architecture that amounted to a Park Service adaptation of contemporary American modern architecture.

The architectural elevations of Park Service Modern visitor centers were stripped of most overtly decorative or associative elements, and the architects typically employed textured concrete with panels of stone veneer, painted steel columns, and flat roofs with projecting overhangs, terraces, or covered walks. Textured concrete block, or slump block, was a favorite (and relatively inexpensive) material. These formal elements often allowed the sometimes large and complex visitor centers to maintain a low, horizontal profile that remained as unobtrusive as possible. Stone and textured concrete could also take on earth tones that reduced visual contrast with landscape settings. In some cases, such as Big Bend (Panther Junction), Zion (Oak Creek), and Rocky Mountain (Beaver Meadows) visitor centers, buildings were sited on a slope, so that the public arrived on one side of the building and were presented with a single-story elevation, while the rear (service/administrative) side of the structure dropped down to house two levels of offices.

The Park Service Modern style developed by the Park Service during the Mission 66 era soon had a widespread influence on state park design nationwide and national park design internationally. The new architecture reinterpreted the long-standing commitment to "harmonize" architecture with park landscapes, and at its best, it did harmonize with its setting in a new way. Park Service Modern building could be both more understated and more efficient than Park Service Rustic buildings had been, since the new approach, when successful, provided more program and function for less architectural presence in the park. This was an important innovation, considering that new, relatively massive buildings were considered necessary to meet the demand for public services in the parks during the Mission 66 era.

The new visitor centers also exhibited a consistency in appearance and quality that was the result of the strongly centralized Mission 66 planning program. While the visitor centers were not standardized, they were the result of standard procedures and policies for design and construction. This consistency helped reinforce the strong sense of a national park "system," of which each park was a part. The Mission 66 visitor center became a recognizable point of reference for visitors, who knew what kind of services they could expect at such a facility, in order to begin their visit as pleasantly and efficiently as possible.

Although the new style had its critics from the very beginning, Park Service Modern, as developed by Park Service designers during the Mission 66 era, became as influential and significant in the history of American national and state park management as the Park Service Rustic style had been. The Mission 66 visitor center remains today as the most complete and significant expression of the Park Service Modern style.

REGISTRATION REQUIREMENTS FOR MISSION 66 VISITOR CENTERS

The following requirements for registering Mission 66 visitor centers in the NRHP are given in three levels of increasing exclusivity. The first level (I) describes the requirements for registration for a historically significant visitor center. The second level (II) describes the requirements for determining "exceptional importance" for a building less than 50 years old. The third level (III) describes requirements for determining national significance.

In all cases, National Register Criteria A and C may apply. Criterion A would apply because the property is associated with events (the Mission 66 program as part of the development of the national park system) that made a significant contribution to the broad patterns of our history. Criterion C would apply because the property embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; or possesses high artistic values. Eligibility under Criterion A relates to significance in one or several of the following areas: Community Planning and Development (park), Conservation, Ethnic Heritage, Entertainment/Recreation, Politics/Government, and Social History. Eligibility under Criterion C relates to significance in one or several of the following areas: Architecture, Landscape Architecture, and Community Planning and Development (park).

I. REQUIREMENTS FOR REGISTRATION

To be considered eligible for listing in the NRHP, 50-year old Mission 66 visitor centers should possess the following characteristics:

1. The visitor center should be one of the important precedents of the Mission 66 program (1945-1956), be one of the visitor centers originally planned and built as part of the Mission 66 program (1956-1966), or as part of the Parkscape program (1966-1972). The

property's period of significance should fall within the years 1945-1972.

2. The visitor center should retain most or all of the physical characteristics described in the description of the property type (above). The visitor center should be a centralized facility that includes multiple visitor and administrative functions within a single architectural floor plan or compound. Programming elements should include interpretive displays, space for slide shows and films, visitor contact, restrooms, and other services. The visitor center should be intended to serve the public by interpreting scenery, natural resources, and cultural sites, and should be a major point of visitor arrival, orientation, and service.

3. The visitor center should possess physical integrity to the period of significance. The NRHP requires that the integrity of a property be evident through historic qualities including location, design, setting, materials, workmanship, feeling, and association. Examples of alterations or remodeling that may impair the historical integrity of a visitor center include (but are not limited to):

    - The addition of a new façade, new entrance wing, or other major exterior alteration that transforms the outward appearance of the building.
    - Complete alteration of entrance and sequence through building, due to the addition of new building wings, entrances, or other major alterations.
    - New roof structure that completely alters exterior appearance of building (such as pitched, raised-seam metal roof replacing original flat roof).
    - Extensive interior remodeling that alters definition of interior spaces, function of spaces, and sequence through spaces.

4. The visitor center should embody distinctive characteristics of a type, period, or method of construction that represent high artistic values. Specifically, the visitor center should be a successful reflection of the principles of "Park Service Modern" style. These include:

    - Building is sited in relation to an overall plan of "visitor flow" in the park, either near the park entrance, en route to a major park destination, or at a park destination.
    - Building design emphasizes plan organization (the design of the floor plans). Floor plan organization allowed segregation of public areas from administrative areas, and also emphasized efficient "visitor flow" through the building itself. A central lobby space is often the arrival point, with trails or other park destinations often accessed as the visitor moves through the building.
    - Building's program centralizes numerous park services, including information, interpretation, rest rooms, and administrative offices.

- Building makes use of the formal vocabulary and materials of contemporary (1945-1972) modern architecture, including flat roofs (as well as other types of roofs), window walls (and other unorthodox fenestration), exposed steel supports, concrete and concrete block construction.
- Overlapping functional spaces (free plans) sometimes evident in floor plan. Public areas usually on one level, or on split levels, segregated from administrative areas.
- Integration of interior and exterior public spaces, often separated by windows, window walls, glass doors, or wooden doors with windows.
- Entrances, exits, and other doorways often are wide, providing easy movement for crowds. Entrances often sheltered by porches, ramadas, arcades, etc. Rest rooms often nearby, with separate outdoor entrance.
- Building emphasizes visitor's experience of spatial procession. This sequence of spaces often features ramps, as well as significant views of park landscapes either from terraces or through large windows.
- Siting of visitor center near landscape or attraction to be interpreted sometimes allows interpretive programs to be extended into the visitor center itself.
- Building's elevations create a mostly low-profile, horizontal effect.
- Building "harmonizes" with its setting through horizontality of massing, color and texture of materials. Use of textured concrete, concrete block, and stone veneers in facades often give building generally rough exterior texture, often featuring earth toned colors.
- Building footprint is often ell-shaped, rectangular around a central courtyard, or a variation on these themes.
- Use of naturalistic planting to partially screen building, utility areas, and parking, as well as to repair areas disturbed in construction. Planter boxes often used to define entrances.
- Outdoor spaces and site work, including parking lots, paths, amphitheaters, terraces, and patios often incorporated into visitor center complex.

II. Requirements for Exceptional Importance

For any property achieving significance within the last 50 years, National Register "Criteria Consideration G" requires that the property must be of "exceptional importance" to be considered eligible for registration. To meet this requirement and be eligible for registration, a Mission 66 visitor center less than 50 years old should possess all the characteristics described above, and in addition, the following requirements should be met:

1. The visitor center should be one of the important precedents of the Mission 66 program (1945-1956), or one originally planned and built

as part of the Mission 66 program (1956-1966). The property's period of significance should fall within the years 1945-1966.

2. The visitor center should possess substantial physical integrity to the period of significance, 1945-1966. This should be considered a higher standard for integrity than that described for National Register listing of significant resources that have achieved 50 years of age. Sufficient features should be intact to relate the property to the Modern movement in terms of massing, spatial relationships, proportion, pattern of windows, texture of materials, and ornamentation. Characteristics critical in defining the building's artistic merit or exemplary modern design should not be altered. Essential features that should be present for a property to represent its significance include the historic main facade and entry, important public spaces inside the visitor center, and other important interior spaces that define the particular buildings's historic character and use as a visitor center. An addition will not disqualify a resource, if it is compatible with the original building and not opposed to the intention of the original design, and if it does not obscure the qualities for which the building is significant.

3. The visitor center should possess exceptional importance in one or more of the following ways:

    o As an outstanding example of "Park Service Modern" style, as defined above, preferably one published in contemporary architectural journals or the recipient of design awards. Building may also be the subject of subsequent scholarly evaluations.

    o As the work of a regionally, nationally or internationally recognized architect or architectural firm, working for the National Park Service. Such a work must be recognized as an outstanding example of Park Service Modern design through evidence of awards and honors, critical acclaim by the press, and scholarly evaluation. Notable architects are defined as those who received high recognition as leaders in their fields and have received critical acclaim for numerous projects over a period of years in major architectural publications. The work of still-practicing architects is generally not considered eligible because the body of their work is yet to be completed and, therefore, cannot be holistically assessed for historical significance.

    o For its demonstration of distinctive programming, planning, or design features that affected the evolution of the visitor center as a building type nationally, regionally, or internationally. Building may have gained special recognition by Mission 66 planners and designers as an important stylistic example or functional prototype for the Mission 66 and Parkscape programs. Building may have served as a stylistic example or functional prototype for visitor center design in state parks, or in other settings, such as arboretums, municipal parks, etc.

    o As an essential part of an overall Mission 66 park development plan that had extraordinary importance in the history and development of an individual park. The building may be part of a larger Mission 66 development area which may be a National Register-eligible historic district.

- For association with events and activities that have made an outstanding contribution to the history of local communities or native groups. This may include the incorporation of programmed space for craft production, demonstrations, and other activities. It may also include aspects of the inspiration for the design, such as the Mesa Verde (Farview) Visitor Center, inspired by kiva design.

III. Requirements for National Significance

The "associated historic context," "period of significance," "associated property type," and "associated architectural style" for National Historic Landmark (NHL) nomination of Mission 66 era visitor centers are all the same as described above in Requirements for Registration. In addition, any property achieving national significance within the past 50 years must possess "extraordinary national importance" to qualify as a NHL.

1. To qualify as a NHL, the visitor center should be an outstanding exemplar of Park Service Modern style in one of the following ways:
    - As the work of a nationally or internationally recognized architect or architectural firm, working for the Mission 66 program during the period 1945-1966. Such a work must be recognized as an outstanding example of Park Service Modern design through evidence of national or international awards and honors, critical acclaim by the national or international press, and scholarly evaluation. Notable architects are defined as those who received high recognition as leaders in their fields and have received critical acclaim for numerous projects over a period of years in major architectural publications. The work of still-practicing architects is generally not considered eligible because the body of their work is yet to be completed and, therefore, cannot be holistically assessed for historical significance.
    - As a foremost example of visitor center design by Park Service architects, especially Cecil Doty. To be considered a foremost example, the visitor center should be an outstanding example of "Park Service Modern" style (as defined above), preferably one published in contemporary journals or the recipient of design awards. Building may also be the subject of subsequent scholarly evaluations which demonstrate its outstanding design achievement, high artistic quality, or pivotal influence on the evolution of visitor center design in national parks, state parks, and elsewhere.
    - The visitor center should have substantial physical integrity dating to the period of signficance, 1945-1966. This should be considered a higher standard for integrity than that described above for National Register listing. Sufficient features should be intact to relate the property to the Modern movement in terms of massing, spatial relationships, proportion, pattern of windows, texture of materials, and ornamentation. Characteristics critical in defining the building's artistic merit or exemplary modern design should not be altered. Essential

> features that should be present for a property to represent its significance include the historic main facade and entry, important public spaces inside the visitor center, and other important interior spaces that define the particular buildings's historic character and use as a visitor center.

For NHL designation, NHL Criteria 1 and 4 would apply. Criteria 1 would apply because the property is associated with events (the Mission 66 program as part of the development of the national park system) that have made a significant contribution to broad national patterns of American history. Criteria 4 would apply because the property embodies the distinguishing characteristics of an architectural type specimen exceptionally valuable for the study of a period, style, or method of construction (Park Service Modern style).

The following NHL Themes would apply:

- III. Expressing Cultural Values
    - 5. Architecture, Landscape Architecture, and Urban Design
- VII. Transforming the Environment
    - 3. Protecting/Preserving the Environment

The following NHL Areas of Significance would apply:

- Architecture
- Landscape Architecture
- Community Planning and Development
- Politics/Government

The following NHL Comparative Categories would apply:

- XVI. Architecture
- XVII. Landscape Architecture
- XXXII. Conservation of Natural Resources
- XXXIV. Recreation

APPENDIX IV

ASSOCIATED LISTINGS IN THE NATIONAL REGISTER OF HISTORIC PLACES

The following Mission 66 era visitor centers have been listed in (or determined eligible for) the National Register of Historic Places.

1. **Rocky Mountain National Park**; Beaver Meadows Headquarters; Estes Park, Colorado; 1964-1967/1967; Taliesin Associated Architects.
   Listed in the National Register on March 18, 1982 as a contributing building in the Rocky Mountain National Park Utility Area Historic District.

2. **Dinosaur National Monument**; Quarry Visitor Center; Jensen, Utah; 1956-1957/1958; Anshen and Allen.
   Listed in the National Register on December 19, 1986, as a contributing building in the national monument.

3. **Gettysburg National Military Park**; Visitor Center and Cyclorama; Pennsylvania; 1958-1961/1962; Neutra and Alexander.
   Determined eligible for the National Register by the Keeper on September 24, 1998.

4. **Wright Brothers National Memorial**; Kill Devil Hills, North Carolina; 1957-1959/1960; Mitchell/Giurgola.
   Listed in the National Register on February 28, 1999, as a contributing building in the national monument district.

5. **Sitka National Historical Park**; Alaska; 1963-1964/1968; NPS WODC/Doty/John Morse & Associates.
   Determined eligible for the National Register by the State Historic Preservation Officer on January 6, 2000.

6. **Cape Cod National Seashore**; Salt Pond Visitor Center; Wellfleet, Massachusetts; 1964-1965; EODC/Biderman.
   Determined eligible for the National Register by the State Historic Preservation Officer on March 10, 2000.

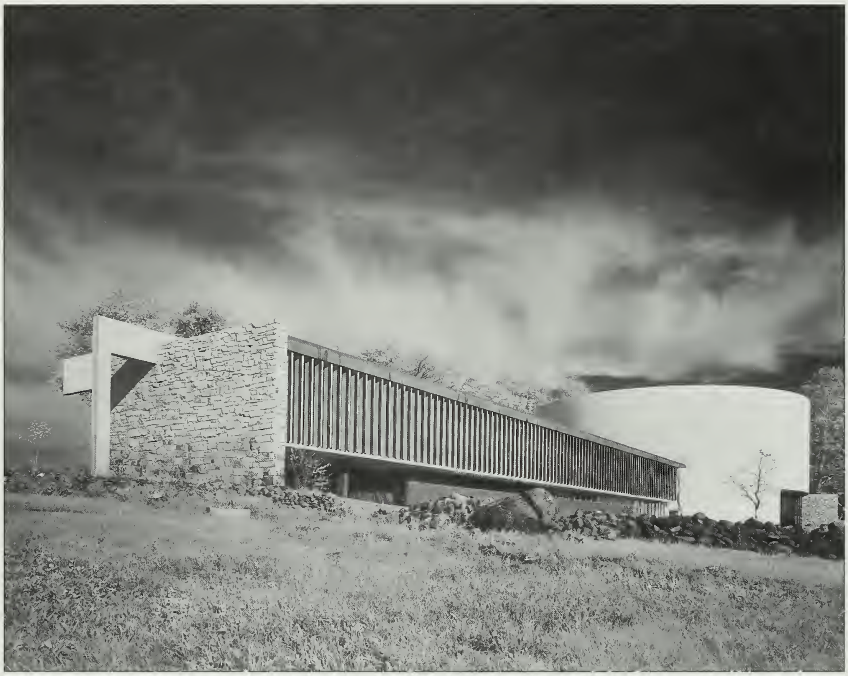


Figure 87. Gettysburg Cyclorama and Visitor Center in 1962. Richard Neutra and Robert Alexander, architects. Courtesy Lawrence S. Williams, Inc., Photography.

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